THRILLING WONDER STORIES

15¢

A THRILLING PUBLICATION

JUNE

THE CHESSBOARD OF MARS
A Novelette of Super-Telepathy
By EANDO BINDER

•

LOST IN TIME
A Novelette of Dimensional Secrets
By ARTHUR LEO ZAGAT

THE MOLTEN BULLET
A Story of Astronomical Doom
By ANTHONY RUD

•

MENACE FROM THE MICROCOSM
A Novelette of Worlds Within Worlds
By JOHN RUSSELL FEARN

STRANGER THAN TRUTH

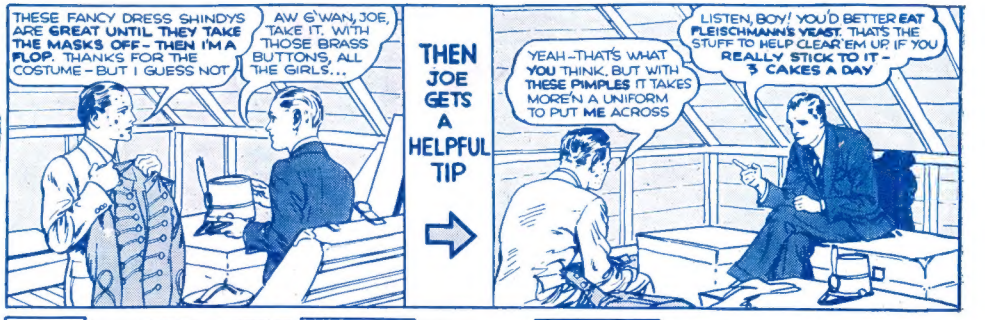
SWELL NEWS!

Start Now to Clear up Your Skin!

Learn the New Steps! BE POPULAR

ARTHUR MURRAY
World's Greatest Dance Instructor—Tells you how to do the very Newest
DANCE STEPS
FREE!

IT COSTS $5 EACH PRIVATE LESSON TO LEARN THESE STEPS IN MR. MURRAY'S NEW YORK STUDIO



ASK YOUR GROCER FOR THIS FREE FLEISCHMANN DANCE CARD . . .

Don't slip up on this big chance, boys and girls! Begin today to save yeast labels for Arthur Murray's *exciting* book of 20 dance lessons!

You CAN'T BUY this book anywhere! The *only way* to get one is with Fleischmann Yeast labels.

Eat 3 cakes of Fleischmann's Yeast *daily* for 27 days. *Save the label from each cake.* Paste these on the *free* Fleischmann Dance Card your grocer will give you.

If your grocer has no Dance Cards, save your 81 yeast labels and send them in an envelope, or pasted up on plain paper.

Send your labels to Fleischmann's Yeast, 701 Washington St., New York City. And don't forget to include *your* name and address. (This offer holds good until August 31, 1937.)

(Details of securing Dance Book differ slightly in states west of Denver and in Canada, see newspapers, or ask your local grocer.)

"Keep eating it regularly," says Dr. R. E. Lee, well-known physician, "and **FLEISCHMANN'S YEAST** will help clear up **ADOLESCENT PIMPLES."**

● After the start of adolescence important glands develop, causing disturbances throughout the system. The skin gets oversensitive. Waste poisons in the blood irritate this sensitive skin. Pimples break through.

Fleischmann's Yeast helps to overcome adolescent pimples by clearing these skin irritants out of the blood. Eat 3 cakes daily—one about ½ hour before meals—plain, or in water.

Copyright, 1937, Standard Brands Incorporated

New 6-Volt TRINDL Electric ARC WELDER

PATENTS PENDING

Works on Storage Battery or 110 Volt Light Circuit

A REAL WELDER

Men, here is the hottest specialty item that has come along in years. A real honest to goodness electric arc welder that does a man size job. Built sturdily of the finest materials. Requires no mechanical knowledge—any one can use it. Every demonstration should make a sale. This new Trindl Electric Arc Welder is made possible by the invention of a low voltage carbon which gets white hot from the current of an ordinary 6 volt storage battery such as in your automobile. It only uses about 20 to 25 amperes of current which is about the same current drain as 4 headlight bulbs, yet develops about 7000 degrees of heat.

MELTS IRON AND STEEL INSTANTLY

The Trindl Welder is simple to use. Expert welding can be done by anyone. The Trindl Arc Welder is the only battery welder that, after a rigid test, has been approved by the Automotive Test Laboratories of America. It is ideal for making permanent fender repairs—also for broken castings, radiators, cylinders, water jackets, holes in auto bodies, hog troughs, boilers, tanks, milk cans, radios, batteries, etc. Iron, Steel, Brass, Copper and Tin can be worked on for a quick and permanent repair. The repaired part will be as strong as before.

NEW 110 VOLT CONVERTER MAKES FULL SIZE PROFESSIONAL UNIT

This new converter is used on any 110 volt 60 cycle electric light socket in place of a storage battery. It is especially designed to be used with the Trindl Electric Arc Welder—COSTS LESS THAN A GOOD BATTERY—The combination makes a full size professional electric arc welder that everybody can use. Ideal for fender and repair shop needs. This is a sensation, not only in price but also in actual results. The converter represents the same fine construction and engineering skill as the arc welder. The complete outfit, including the transformer, is easily portable so that it can be brought right to the job.

USERS SWEAR BY IT—The price is so low that now anyone can afford to have a real welding outfit. Think of the profit you can make introducing this Trindl Welder and Converter—a simple five minute demonstration should make a sale to every interested prospect, especially when they hear the amazingly low price. Garages, radio and battery men, tinners, sheet metal workers, janitors, farmers and home-owners all need the Trindl Welder and Converter.

ACT NOW! There are big profits and a steady business waiting for you taking care of your territory for us. Don't let someone else get in before you—Send coupon Today.

TRINDL PRODUCTS

2229-HM Calumet Ave., Chicago, Ill.

RETAILS FOR **$5.75** EA.

FACTS

Here are just a few excerpts from the many letters of praise we have received from Trindl Electric Arc boosters.

"Please find enclosed for 12 welders by return mail for I am about sold out now. They are selling fine."—W. C. Anderson, Nebr.

"Received my Trindl Arc Welder and am both pleased and surprised."—Louis F. Glier, Ohio.

"Results are very gratifying with your welder. I am enclosing an order for 12 more Electric Arc Welders." — Nelson O. Lyster, Florida.

"I received my welder, and it is a regular repair shop in itself." —J. R. Harper, La.

"I sold 4 of your Trindl Electric Arc Welders in three minutes." —C. Gillies, Canada.

"I sold 9 welders in my first ten calls."—F. W. Stice, Iowa.

$10.50 a day profit for you for only selling 6 Trindl Arc Welders. No matter where you turn, you will find people who will want to buy arc welders from you. Garages, shop men, radio repair men, farmers, home-owners, mechanics, janitors, all of them need Trindl Electric Arc Welders. Be the man in your territory to clean up with Trindl.

MAIL COUPON NOW!

TRINDL PRODUCTS
2229-HM Calumet Ave.
Chicago, Illinois

Yes! Rush me free particulars of how I can make big money with Trindl Electric Arc Welders and Converters. This does not obligate me in any way.

Name .....

Local Address.....

City .....

State .....

THRILLING WONDER STORIES

The Magazine of Prophetic Fiction

VOL. 9 No. 3

JUNE, 1937

IN THE NEXT ISSUE

•

THE DOUBLE MINDS
A Scientific Adventure Novelette
By
JOHN W. CAMPBELL, JR.

•

CONQUEST OF LIFE
A Novelette of Laboratory Magic
By
EANDO BINDER

•

RIFT IN INFINITY
A Novelette of Absolute Space
BY
PAUL ERNST

•

THE IRON WORLD
A Novelette of Robot Rebellion
BY
OTIS ADELBERT KLINE

•

—and many other Unusual Novelettes and Stories.

Table of Contents

• COMPLETE NOVELETTES

MENACE FROM THE MICROCOSM
By JOHN RUSSELL FEARN..... 14

LOST IN TIME
By ARTHUR LEO ZAGAT..... 40

THE CHESSBOARD OF MARS
By EANDO BINDER..... 72

• THRILLING SHORT STORIES

THE MOLTEN BULLET
By ANTHONY RUD..... 31

DARK SUN
By RAYMOND Z. GALLUN..... 56

DARCONDRA
By RICHARD TOOKER..... 63

RENEGADE
By J. HARVEY HAGGARD..... 88

GREEN HELL
By ARTHUR K. BARNES..... 91

THE BLACK VORTEX
By FRANK BELKNAP LONG, JR..... 104

• SPECIAL PICTURE FEATURES

IF—!
By JACK BINDER..... 87

ZARNAK
By MAX PLAISTED..... 101

• NEW SCIENCE FEATURE

SCIENTIFACTS
By J. B. WALTER..... 70

• OTHER FEATURES AND DEPARTMENTS

THE STORY BEHIND THE STORY..... 10
TEST YOUR SCIENCE KNOWLEDGE..... 86
SCIENCE QUESTIONS AND ANSWERS..... 115
THE READER SPEAKS..... 117
THE SCIENCE FICTION LEAGUE..... 122
THE "SWAP" COLUMN..... 125
SCIENTIFILM REVIEW..... 127
FORECAST FOR THE NEXT ISSUE..... 129

• ON THE COVER

Jim Dunning, of the year 1938, follows a stratocar of the future to its landing field. This scene depicts the climax of Arthur Leo Zagat's novelette, LOST IN TIME.

Published bi-monthly by BEACON MAGAZINES, INC., 22 West 48th Street, New York, N. Y. N. L. Pines, President.

Copyright, 1937, by Beacon Magazines, Inc.

Yearly $.90; single copies, $.15; Foreign and Canadian, postage extra. Entered as second-class matter May 21, 1936, at the Post Office at New York, N. Y., under the Act of March 3, 1879.

Names of all characters used in stories and semi-fiction articles are fictitious. If a name of any living person or existing institution is used, it is a coincidence.

Manuscripts must be accompanied by self-addressed, stamped envelopes, and are submitted at the author's risk.

Posed by professional models

SKINNY?

Thousands Have Gained Normal Attractive Flesh This Special *Quick Way*

WHY should thousands of people today remain skinny and friendless when this new discovery is giving other thousands solid, normally attractive flesh—gains of 10 to 25 pounds—*in just a few weeks!*

People who never could gain an ounce before have not only put on all the weight they wanted, but also report naturally clear skin and good-looking color, wonderful new pep and energy that bring loads of new friends and joyous new popularity. Don't be a "stick-in-the-mud" when you too may build yourself up this easy way.

Why it builds so quick

Doctors now know that thousands of people are thin and rundown for the single reason that they do not get enough Vitamin B and iron in their daily food. Without these vital elements you may lack appetite and not get the most body-building good out of what you eat.

Now one of the richest known sources of Vitamin B is cultured ale yeast. By a new process the finest imported cultured ale yeast is now concentrated 7 times, making it *7 times more powerful.* Then it is combined with 3 kinds of blood-building iron, pasteurized whole yeast and other valuable ingredients in pleasant little tablets known as Ironized Yeast tablets.

If you, too, need these vital elements to aid in building you up, get these new "7-power" Ironized Yeast tablets from your druggist today. Note how quickly they increase your appetite and help you get more benefit from the body-building foods that are so essential. Then, day after day as you take them, watch flat chest develop and skinny limbs round out to natural attractiveness. See better color come. Soon you feel like an entirely different person, with new charm.

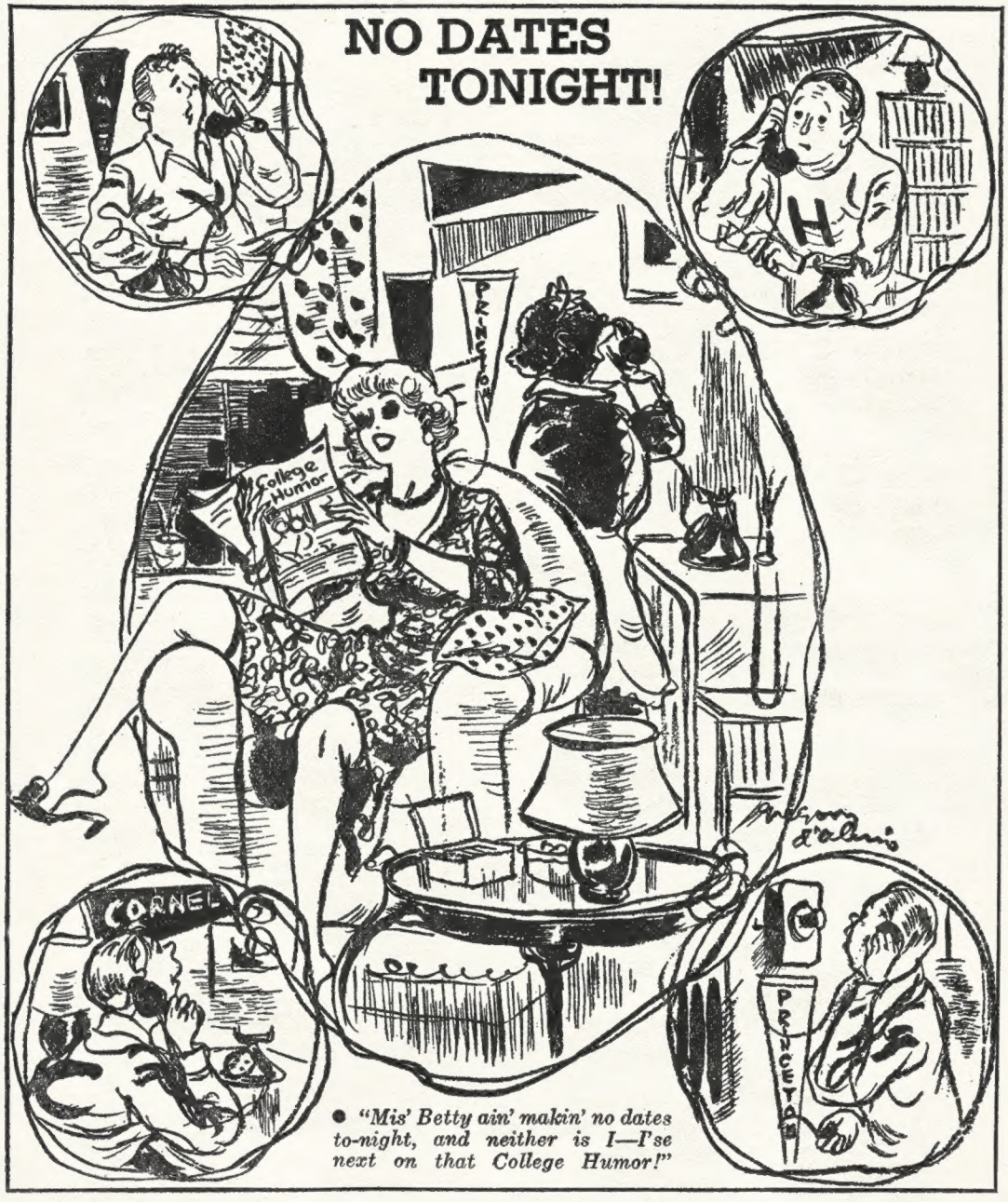
Money-back guarantee

No matter how skinny and rundown you may be from lack of sufficient Vitamin B and iron, try these new Ironized Yeast tablets just a short time. See if they don't aid in building you up in just a few weeks, as they have helped thousands of others. If you are not delighted with the benefits of the very first package, money back instantly.

Only be sure you get genuine Ironized Yeast. Beware substitutes. Look for "IY" stamped on each tablet.

Special FREE offer!

To start thousands building up their health right away, we make this absolutely FREE offer. Purchase a package of Ironized Yeast tablets at once, cut out the seal on the box and mail it to us with a clipping of this paragraph. We will send you a fascinating new book on health, "New Facts About Your Body." Remember, results with the very first package—or money refunded. At all druggists. Ironized Yeast Co., Inc., Dept. 776, Atlanta, Ga.



● *"Mis' Betty ain' makin' no dates to-night, and neither is I—I'se next on that College Humor!"*

SPECIAL!!

NINE ISSUES FOR

$1.00

SUBSCRIPTION DEPT., COLLEGE HUMOR **TF6**
22 WEST 48TH STREET, NEW YORK CITY

My dollar is pinned to this coupon. Please send the next nine issues to:

Name.....

Address.....

City.....STATE.....

(Foreign, $1.60)

Make me Prove

THAT I CAN TRAIN YOU AT HOME FOR A Good Job in Radio

Here's Proof That My Training Pays

OWNS PART TIME RADIO BUSINESS

"I am a locomotive engineer with the B. & M. Railroad, and work part time in Radio. In the selling end I have made as high as $300 in one month and have added to that about $100 in service work." FRANK McCLELLAN, 902 Elizabeth St., Mechanicville, N. Y.

PARTNER IN LARGE RADIO SUPPLY HOUSE

"Our concern has grown by leaps and bounds until it is today the largest wholesale Radio supply house in New England. We have established branches at Portland, Maine, and Barre., Vt. The N.R.I. Man travels the highway to profits in Radio." REYNOLDS W. SMITH, 1187-91 Elm Street, Manchester, N. H.

DOUBLED SALARY IN 5 MONTHS

"Shortly after I started the N.R.I. Course I began teaching Radio classes at the Spartan School of Aeronautics. After five months I was given a chance to join the American Airlines at a salary double that which I received from the school." A. T. BROTHERS, 2554 Hill St., Santa Monica, Calif.

I Will Send You a Sample Lesson FREE

Clip the coupon and mail it. I will prove to you that I can train you at home in your spare time to be a RADIO EXPERT. I will send you my first lesson FREE. Examine it, read it, see how clear and easy it is to understand—how practical I make learning Radio at home. Then you will know why men without Radio or electrical experience have become Radio Experts and are earning more money than ever as a result of my Training.

Many Radio Experts Make $30, $50, $75 a Week

Radio broadcasting stations pay engineers, operators, station managers up to $5,000 a year. Spare time Radio set servicing pays as much as $200 to $500 a year—full time servicing work pays as much as $30, $50, $75 a week. Many Radio Experts own their own businesses. Manufacturers and jobbers employ testers, inspectors, foremen, engineers, servicemen, paying up to $6,000 a year. Automobile, police, aviation, commercial Radio, and loud speaker systems are newer fields offering good opportunities now and for the future. Television promises many good jobs soon. Men I have trained are holding good jobs in all these branches of Radio.

Many Make $5, $10, $15 a Week Extra in Spare Time While Learning

Starting the day you enroll, I send you Extra Money Job Sheets. They show you how to do Radio repair jobs that you can cash in on quickly—give you plans and ideas that have made good spare time money—from $200 to $500 a year—for hundreds of fellows. I send you Radio equipment to conduct experiments and give you practical Radio experience.

Money Back Agreement Protects You Save Money—Learn at Home

I am so sure that I can train you successfully that I agree in writing to refund every penny you pay me if you are not satisfied with my Lessons and Instruction Service when you finish. I'll send you a copy of this agreement with my Free Book.

Get My Lesson and 64-Page Book FREE. Mail Coupon

In addition to my Sample Lesson, I will send you my 64-page book, "Rich Rewards in Radio," FREE to anyone over 16 years old. My book describes Radio's spare time and full time opportunities and those coming in television; describes my Training in Radio and Television; shows you actual letters from men I have trained, telling what they are doing and earning; tells about my Money Back Agreement. MAIL THE COUPON in an envelope, or paste it on a penny postcard.

J. E. SMITH, President
National Radio Institute
Dept. 7F09 Washington, D. C.

THIS FREE BOOK
Has Helped Hundreds of Men Make More Money

GOOD FOR BOTH 64 PAGE BOOK SAMPLE LESSON **FREE**

J. E. SMITH, President, National Radio Institute, Dept. 7F09, Washington, D. C.

Dear Mr. Smith:
Without obligation, send me the Sample Lesson and your free book about the spare time and full time Radio opportunities, and how I can train for them at home in spare time. (Please write plainly.)

Name..... Age.....

Address .....

City..... State.....2FR

I AM A STRIP TEASE GIRL

Many Men Wanted Me—but Few of Them Offered Me Their Love!

THE most garish entertainment which Broadway has to offer to pleasure seekers is the burlesque show.

When I graduated from Miss Willis' dancing school back home, I certainly had no thought of eventually landing in a burlesque show. And at that time I had never heard of a strip-tease girl, the main attraction of these shows.

I was seventeen at the time, and knew that I was as lovely as most of the girls whose photographs were displayed before the theatres on Broadway. Surely, I thought, there would be something for me to do.

So, full of ambition and hope, I went the endless rounds of the theatrical offices along the Great White Way. I was not discouraged when the first couple of weeks failed to turn up a job. It was not until the little hoard of money that was mine dwindled to ten dollars that I began to worry.

Today, no one knows of those early struggles of mine. I finally made the feature spot in a big-time Broadway show. But I got there via the burlesque show—a strip-tease girl graduated from Zimsky's to Ziegfeld's.

Maybe it was because I was, at heart, a dancer that I came out of the runway chorus of burlesque and on to a sensational success as one of Broadway's highest paid stars.

Many things happened in my life from the time I stood before Dave Herman, stage manager for Zimsky's burlesque houses, trembling as his bold, black eyes

Continue This Startling Personal Revelation in the JUNE Issue of

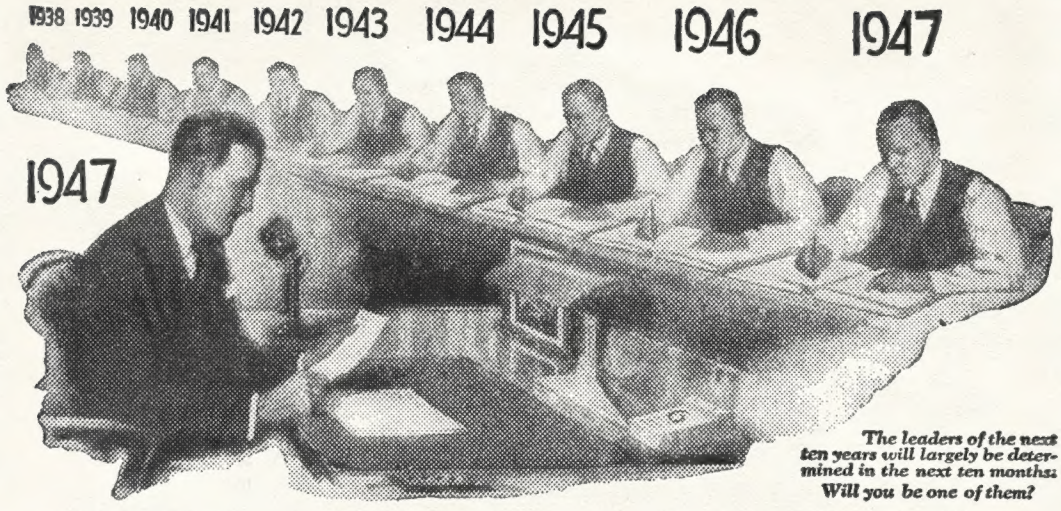
THRILLING

Confessions

A NEW MAGAZINE OF TRUE STORIES FROM LIFE

•

Many Stories And Features 10c Now On Sale At All Stands



The leaders of the next ten years will largely be determined in the next ten months: Will you be one of them?

Will You Be Clerk or Manager Ten Years from Now?

"SURELY, this could never happen to *me*," you say—"that I should be sitting at the same desk—be doing the same work—*for ten straight years!*" But wait a minute—

Exactly that same thing has happened to thousands upon thousands of men. It has probably happened to men right in the company you now are working for. *And—unless you fit yourself for a better job—there is a very good chance that it may happen to you!*

Unthinkable? That's what J. N. Dixon of Columbus, Ohio, said to himself. Yet lack of training kept him slaving away at low wages for a long time.

TRIPLES INCOME

Here is Mr. Dixon's own story—"Just after I returned from the war, one of your representatives found me plugging away at a bookkeeper's job in Marietta, Ohio. He performed a real service and explained to me the need of further training, and induced me to take the LaSalle training in Higher Accountancy. After a few months of study, I secured a position with the Trust Department of a National Bank. This was the stepping stone I needed to various responsible positions including handling of receiverships and other important duties. That quickly boosted my income several hundred percent."

ANOTHER AMAZING SUCCESS STORY

If you think Mr. Dixon's success story unusual, please read what J. H. Krouse of Memphis, Tennessee, says. "When I decided to take your training in Higher Accountancy, I was a clerk. Today I am Chief Consultant Accountant for the U. S. Engineer's Office in Memphis, Tenn. Whatever success or recognition I have had, I owe to your training. I have had no other specialized training along this line. Your method of teaching is not only instructive but highly engaging. I have observed other courses, but firmly believe LaSalle has the best to be had anywhere."

Another bit of proof is Mr. R. P. Barthalow's experience. Mr. Barthalow is Chief of the Sales Tax Section of the Tax Commission of Ohio. A department which handles over $50,000,000 a year. Mr. Barthalow attributes much of his success to LaSalle training.

SEND FOR These Two Books and Start Toward Bigger Success

Need you hear more before you investigate the opportunities in Accountancy?

Or will you face the problem of your future NOW—and send to LaSalle and get further facts and particulars?

Without cost or obligation, the coupon will bring you two interesting books—one a 64-page book entitled, "Accountancy, the Profession that Pays"; the other "Ten Years' Promotion in One."

How about those next ten years—will you wait or will you START TODAY to realize the tremendous opportunities that lie ahead of you through sound and practical home-study business training?

Measure your grit and ambition by what you do with this coupon—NOW.

LaSalle Extension University

LASALLE EXTENSION UNIVERSITY, Dept. 6329-HR **CHICAGO**

Opportunities in Accountancy—Check below and we will send you a copy of "Accountancy, the Profession that Pays," also copy of "Ten Years' Promotion in One," all without obligation.

☐ **Higher Accountancy:** Leading to position as Auditor, Comptroller, Certified Public Accountant, Cost Accountant, etc.

Other LaSalle Opportunities: If more interested in one of the other fields of business indicated below, check that.

☐ Business Management	☐ Law: Degree of LL. B.	☐ Stenotypy
☐ Expert Bookkeeping	☐ Industrial Management	☐ Business English
☐ C. P. A. Coaching	☐ Personnel Management	☐ Commercial Law
☐ Modern Salesmanship	☐ Modern Business Correspondence	☐ Effective Speaking
☐ Traffic Management		

Name .....

Present Position ..... *Address* .....

The Story Behind the Story

IT is interesting to study the reactions of a group of science fiction authors to different plot stimuli. One newspaper clipping pertaining to some technical discovery may influence several writers in turning out stories based on the same general theme, yet it is pretty certain that all the resulting stories will be different in scope and treatment. Why? Mainly because the idea gleaned from the newspaper excerpt in each case served as a prod to the authors' imaginations, made them unleash on paper a group of individual ideas and observations they had been subconsciously accumulating for perhaps many months.

And so it is with our featured stories this month. Different stories, inspired in a variety of fashions. Here's the lowdown on the yarns in this issue—but make certain you've read them all before consulting this department!

SUPER-TELEPATHY

THE CHESSBOARD OF MARS, by LEANDO BINDER, carries one of the most fascinatingly original ideas we have seen in a long while.

Here's how the versatile author explains the origin of his plot:

CHESSBOARD OF MARS was inspired, so to speak, by an article in Scientific American some years back which tabulated the results of ten-year observations on mental phenomena at Columbia University. These tests, conducted on a strictly scientific basis and running into innumerable attempts at extra-sensory transmission of thought, gave rather clear indication that more than just the law of averages was working. In fact, it was flatly stated that there must be a direct transference of thought from mind to mind. The percentage was small, but undeniably there.

This concession by a comparatively staid popular science journal to the previously ridiculed idea of telepathy was, to me, a distinct score of imagination versus skepticism or materialism. A sort of Jules Vernian victory for pseudo-science, which has long taken telepathy for granted. Therefore, a telepathy story was in order.

That was the genesis of the inspiration. The plot-idea came about more gradually. I needed a new angle on telepathy, a new series of causes and effects involving that mysterious transference of thought radiations, whatever they are, which accounts perhaps for so much of the unexplainable in human life. And human history. History—telepathy. Somehow they seemed to tag. Who knows how many of the events in history have been a result of mental phenomena, not only those of demented kings but of psycho-sensitive keystone figures.

But here, I was getting away from science fiction into philosophical rambling. It needed an injection of fantasy. History—telepathy—and what more? Alien control. They were as incommensurable at first as a square and a circle, with a tesseract thrown in. Yet eventually it worked out. To what degree of coherence, though, only you readers can say.

THE VEIL OF TIME

ARTHUR L. ZAGAT uncovers the veil of the future centuries in his time-traveling novelette, LOST IN TIME. Here's what he has to say about it:

Sometimes a story tells itself to the writer, as though he were an automatic transmitter of a message from Beyond the Veil, and in no measure the creator.

That is exactly what happened with LOST IN TIME. I had no more idea of what was going to happen to Jim Dunning, when he leaped to the wheel of his yawl in a frantic effort to escape the threat of the flaming pillar that spewed out of the calm Pacific than you had when you started reading the manuscript. And every incident after that wrote itself fresh on the paper in front of me without forming first in my brain.

Believe it or not, that is the "Story Behind the Story" of LOST IN TIME. I don't know whether it means nothing, or whether it means that somewhere, some time, its incidents have happened or will happen; that I have been the involuntary, unknowing medium of some incredible clairvoyance.

THE SPACE-TIME CONTINUUM

THE BLACK VORTEX, by FRANK B. LONG, JR., is an unusual tale of cosmic phenomena that contains a double idea. How the story materialized from idle speculation into cold print makes interesting reading:

In the BLACK VORTEX I have tried to clothe in garments of imaginative prose the stripped bones of two ideas which have fascinated me for some time. Previous speculation has encumbered the mysterious character of the space-time continuum and the immense uncertainty which veils the future of man's life on Earth with trimmings which have left the basic, skeletal framework obscured. Some of these speculations are enthralling and I am grateful for them. But before writing my story I was compelled to strip them away, leaving the bones exposed, but not dry. Bones so fascinating must always drip with wonder. I do not claim that my garments fit this bright and wonderful skeleton with cosmic precision. It probably looks a bit cramped in them—as it does in the garments of all of my predecessors. But at least it is a new suit, a new set of trimmings and peculiarly my own. Jeans and Eddington could make a more scholarly job of it, but the subject is fascinating and glorious enough to challenge the ingenuity of a thousand thousand more obscure and less learned tailors, and if this little imaginative excursion of mine—into which I have put a great deal of reverent reflection and mental elbow grease—seriously turns the thoughts of even a few readers toward what is unquestionably the sublimest mystery of the Universe, I shall rest content.

ALIEN LIFE

NOTHING is so popular these days as the science fiction story which introduces new and alien forms of life. ARTHUR

(Concluded on Page 12)

I will train you for the BIG jobs IN RADIO AND TELEVISION...

LEARN AT HOME DURING SPARE TIME

QUALIFY for U.S. GOV'T. LICENSE

Proof

I operate at KGB, a CBS station, and also have a spare time service job at Sears Roebuck which nets me $100.00 a month more. Then I pick up $25 to $50 a month on sale of tubes and parts. Lloyd Mitchell, Escondido, Calif.

... Thanking you for what you helped me with, I found work in two weeks. I am employed at Radio Station WOOD and WASH.
Chas. A. Caldwell, Grand Rapids, Mich.

At present, I have six offers of jobs, ranging from $95.00 per month to $276.00.
Neil Anderson, Ellinwood, Kans.

I am now working a seven hour shift on transmitter at KRBC. I had no difficulty in starting in on a shift after the first day, thanks to FNT training.
J. B. Casey, Abilene, Texas

Greetings from KGKY in Scottsbluff, Nebraska. I am employed here as an operator
Earnest Neath, Scottsbluff, Nebr.

I have secured employment as Radio Engineer for Lynchburg Police Station and during spare time I am at the local broadcasting station WLVA.
Jas. W. Johnson, Lynchburg, Virginia

Radio offers tremendous opportunities for qualified men. What's more, commercial television will quickly be demanding thousands of Trained men. Men who LEARN NOW will have a chance at the big jobs.

TELEVISION BROADCASTS DAILY

Television Station W9XAL, Kansas City, which we have owned and operated since 1932, broadcasts television programs every day of the year. The advanced discoveries and COPYRIGHTED information fresh from this Television Station, from our commercial station KXBY, as well as from our celebrated experimental laboratories form an important part of our regular study courses. No wonder First National Television training puts you way ahead of others and assures quicker success. *We know because we are doing all the things we teach you.*

Full Time and Part Time Jobs.—Broadcasting Stations need more operators and technical experts as business increases. Many new stations are being built—and licensed operators make up to $5000 per year. Spare time earnings up to $10 and $20 weekly. We show you how to earn while learning.

LEARN FROM EXPERTS IN RADIO-TELEVISION

My celebrated home study course embodies the knowledge of experts in the big field of Radio and Television. Men who have pioneered and spent years in research and development work. My course brings you the newest and exclusive practical information available only through our active engineers of our Commercial Radio and Experimental Television Stations.

Simplified Modern Training—Easy to Learn. Over 80 simplified, practical, highly illustrated assignments complete this intensely interesting home study plan—written by men who know. And that's not all—we teach you not only theory but by actual practice.

Generous Laboratory and Experimental Equipment—I have made it possible for you to have elaborate experiments and expensive equipment including Cathode Ray Tubes, photo electric cells, 6-tube high fidelity receivers (with both ear phones and loud speaker)... important and necessary equipment for carrying on your practical experiments... all yours to keep WITHOUT OBLIGATION OR ADDED COST TO YOU.

Qualify for U. S. Government License. Here's the ticket that opens the door of opportunity for you. A U. S. Government radio-telephone operator license which qualifies you for the big jobs. Get it the First National way.

Don't miss this chance at SUCCESS! ACT NOW!! Get all the facts about my great Radio-Television Study Course. You can earn while you learn! Write today and I will send you absolutely free, my new book entitled "VISION". This is your opportunity. Don't delay—Mail coupon now. ***S. Q. NOEL, President . . .***

FIRST NATIONAL TELEVISION, INC., TRAINING DIVISION KANSAS CITY, MISSOURI

FREE BOOK

EARN $35 $50 A $75 WEEK

S. Q. NOEL, President
First National Television, Inc.
Dept. 1X6, Power & Light Bldg., Kansas City, Mo.

Rush me a copy of your new book "Vision" outlining the opportunities in Radio-Television and how I can earn while I learn at home.

NAME_____ AGE_____

STREET_____

TOWN_____ STATE_____

GET FULL FACTS · MAIL COUPON

THE STORY BEHIND THE STORY

(Concluded from Page 10)

K. BARNES' story of Venusian environment, GREEN HELL, initiates the reader into a world of biological wonders. The strange chloro-men, the darting whiz-bang flies, and the freakish bat-men—Mr. Barnes has managed to combine them all into a top-notch interplanetary adventure yarn. And it was plenty hard work! At least, that's what we gather from the following letter:

GREEN HELL was simply a natural outgrowth of that age-old and inevitable speculation that always develops when you bring two scientifiction fans face to face, wind 'em up, and set 'em going—namely, the possibility of life on planets of the Solar System other than our own.

Venus has always been a favorite of mine, with its similarity to Earthly conditions and its eternal veil of mystery. Yet after a perusal of most of the recorded observational and speculative data concerning Venus, I was struck very forcibly by the contradictory nature of the evidence. Scarcely three or four writers seem to agree on more than a few points. Well, more for curiosity than anything else, I set down the scant agreed-upon facts in one column, and the many guesses in another, and let the old imagination roam. Given such-and-such surface conditions, what life-forms might we expect to develop on Venus? I imagine two readers out of every three have at one time or another indulged themselves in this fascinating pastime. Perhaps they've even reasoned better than I; if so, I'd appreciate hearing from them. At any rate, I figured out what I thought would be a pretty reasonable Venusian flora (the fauna I'm saving for another yarn) when it dawned on me that I had the groundwork for a story.

By the process of putting two characters into that situation, making them combat the problems facing them by science predicated on contemporary developments, and seeing what they would do if left by themselves, I had the story. The plot—adventure on another planet—is far from new, but that type of yarn will live as long as science fiction, and will always justify itself either by good writing, or by well-thought-out sketches of probable life developments, or by vigorous action. I prefer the second justification myself, and so, I believe, do many readers.

I daresay the inimitable Weinbaum has outdone me in this sort of thing, but the field is so vast that there's plenty of room for your humble servant to stumble around without treading on the robes of the former king of scientifiction.

WORLDS WITHIN WORLDS

JOHN RUSSELL FEARN'S engrossing story of intra-atomic life, MENACE FROM THE MICROCOSM, presents much food for thought. Here's how the highlights of this theme were conceived by Mr. Fearn:

It seemed to me before I plotted out MENACE FROM THE MICROCOSM that the conception of intra-atomic worlds, though by no means novel, had not so far been explored in all its possibilities. I got to thinking of the far future, when man will, we hope, have conquered space as well as the planet he lives on. At this period might it not be possible that, with space travel accomplished, the intra-atomic will also have been probed to its limits? I decided therefore to cast my story in this far future mould when intra-atomic travel is as an accomplished fact as world air flight is today.

What uses, though, would the microcosmic beings make of this easy journeying to and fro? The undying love of conquest is as surely reflected in the little beings as in the larger ones, hence the idea that the novelty of the accomplishment might be turned to really grim purpose. What purpose? Obviously as a method for sending spies, infinitely reduced in size, to the world of the Big, whereupon with their super-mentalities they could overthrow not one world but several. So came the idea of the savage, conquering Ukians, turning smallness and hypnotic power to the best possible use in the hope of ultimate victory, only to be defeated by an accident.

There is, of course, an inconsistency in the story in regard to Time. As we know it at present it is assumed that nearly one thousand million years passed on an electron while but a millionth of a second passes on Earth. It is assumed, therefore, in this future age, that man has found ways and means of bridging the gap, or else has found the truth, dimly hinted at by mathematicians of today, that Time does not really exist.

In either event there is not the slightest reason to suppose but what microscopic beings might take advantage of the conquest of size in the manner I have depicted. It gave me great pleasure to debate the possibilities while I wrote it; I hope that some of you at least will have an equal pleasure in reading it.

ASTRONOMICAL DOOM

A COSMIC collision is a familiar science fiction situation, all right. But along comes ANTHONY RUD with his breath-taking story, THE MOLTEN BULLET, and the result is one of the most dramatic tales we have ever seen. Read this story first—*then* this letter:

Astronomy inspired my yarn. Just within the past few years several hair-raising phenomena of the heavens have been suspected and fairly well proved by astronomers. The great black spaces of Void, for instance, are **not** vacant, but now have been shown in many

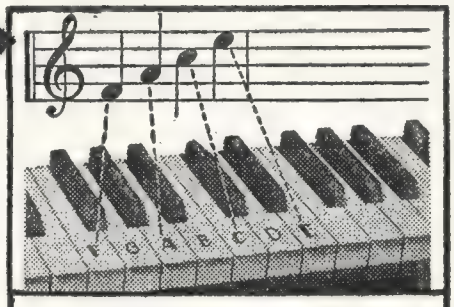
cases to hold sinister black stars and planets, bubbling and surging with terrific internal heat—but heat which produces only black (infra-red) light, which cannot be detected by human eyes!

Astronomers are revising everything. These great bodies of the skies perhaps explain some of the wild eccentricities of other heavenly bodies. They may cause collisions, great readjustments of many solar systems —including our own. They explain why comets and asteroids sometimes fail to appear on time, or even why some disappear forever. They are drawn into collision and utterly demolished, with the unfortunate targets they strike!

This thought, plus a knowledge of scientists—who are men with a passion for their own work and the rightness of it, which in many transcends any fear of death—lay behind my story.

You think you *can't* learn Music?

Just try this!



Easy as A-B-C

Look at the notes above—they are: F-A-C-E. Could anything be simpler to remember? You have already begun to learn to read music. And it's just as easy to *play*, for a remarkable invention, the "Note-Finder," tells you just where each note is located on the piano.

Look at Pictures and Play

Just imagine! Instead of spending tedious hours in study, instead of puzzling over obscure points, you look at clean-cut pictures that make every step as clear as day. Even children not yet in their teens soon learn to play by this fascinating print-and-picture method.

Which instrument do you want to play?

Here's *Free Proof* you can learn quickly—at home

IF YOU have ever had any desire to play a musical instrument—if you have ever longed for the good times, the popularity and friendships that music makes possible, then here is amazing proof that you CAN learn to play—easily, quickly, in spare time at home. What's more, in just a short time from today, you can actually be PLAYING. Yes, playing the piano, the violin, or whichever instrument you please. Playing all the latest popular songs, the old-time favorites, even classical music.

No Knowledge of Music Required

Forget all you have ever heard about music being hard to learn. Dismiss your fears of tedious study and practice. Never mind if you do not know a single note of music.

This modern way to learn music will open your eyes! It's *easier* than you ever thought possible—and it's FUN. No old-fashioned drudgery, no tiresome drills and exercises. Instead, you start playing real tunes by note almost at once. You are thrilled to discover that you can actually create music! Soon you are experiencing the joys of musical self-expression. Soon you are winning popularity; you are being showered with compliments and applause.

Make Money, too!

Perhaps you have never thought of making money with music. But you may be pleasantly surprised to find how many opportunities it brings! Others have quickly started turning spare hours into cash and not a few have been launched on brilliant musical careers.

Does it all seem "too good to be true?" Then send for the Free Proof. Mail the coupon for the fascinating illustrated booklet that tells all about this wonderful way to learn music at home—in just a few minutes a day—without a private teacher, without any special talent or previous training. With the booklet you'll also receive a free Demonstration Lesson that shows exactly how it is done.

FREE—Just Mail Coupon

Over 700,000 others have already been convinced. Surely, if *you* earnestly want to learn to play, you owe it to yourself to examine the proof. There is no cost or obligation in writing. Just mention the instrument that interests you. If you do not already own one, we can arrange to supply it on easy terms. U. S. School of Music, 2946 Brunswick Building, New York, N. Y.

SEND FOR FREE DEMONSTRATION LESSON

PICK YOUR FAVORITE

Piano	Mandolin	Organ
Violin	Ukulele	Drums and Traps
Guitar	Cornet	Harmony and Composition
Accordion	Trumpet	Voice and Speech Culture
Saxophone	Harp	
Cello	Clarinet	
Hawaiian Guitar	Trombone	
Banjo	Flute	
	Piccolo	

U. S. School of Music,
2946 Brunswick Bldg.,
New York, N. Y.

Gentlemen: Please send me Free Proof that I can learn to play the .....including your illustrated booklet and Demonstration Lesson.

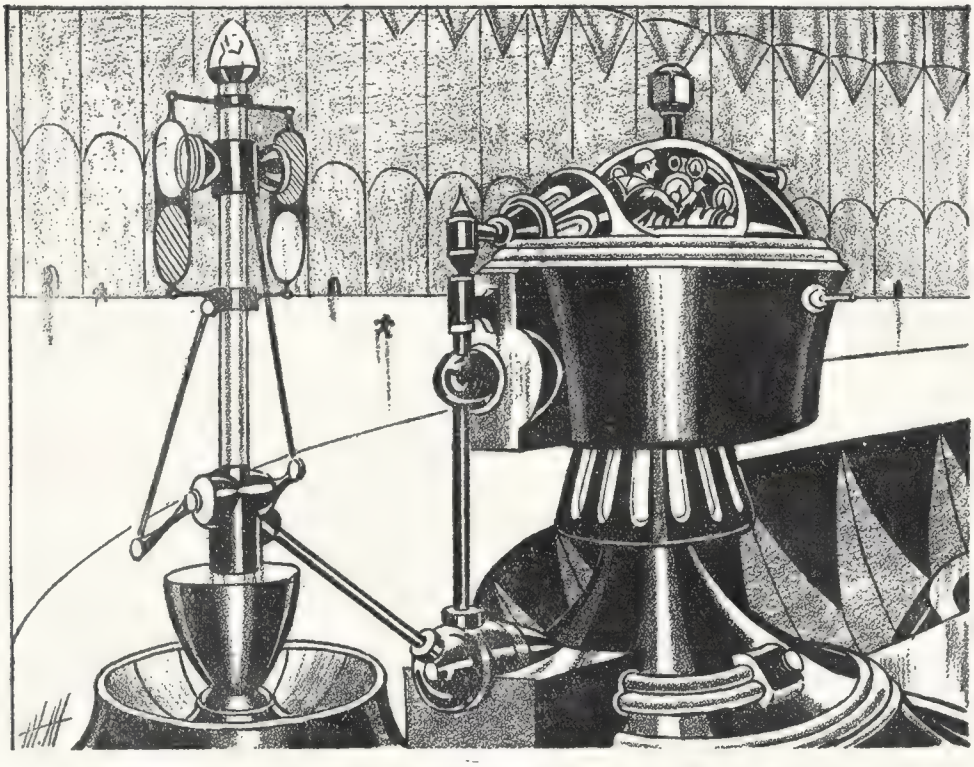
Have you Instr.?.....

Name.....

Address.....

City.....State.....

MENACE FROM



Within five minutes the atomic freighter merged from tininess to its complete size.

A Complete Novelette of Worlds Within Worlds

By JOHN RUSSELL FEARN

Author of "Brain of Venus," "Mathematica Plus," etc.

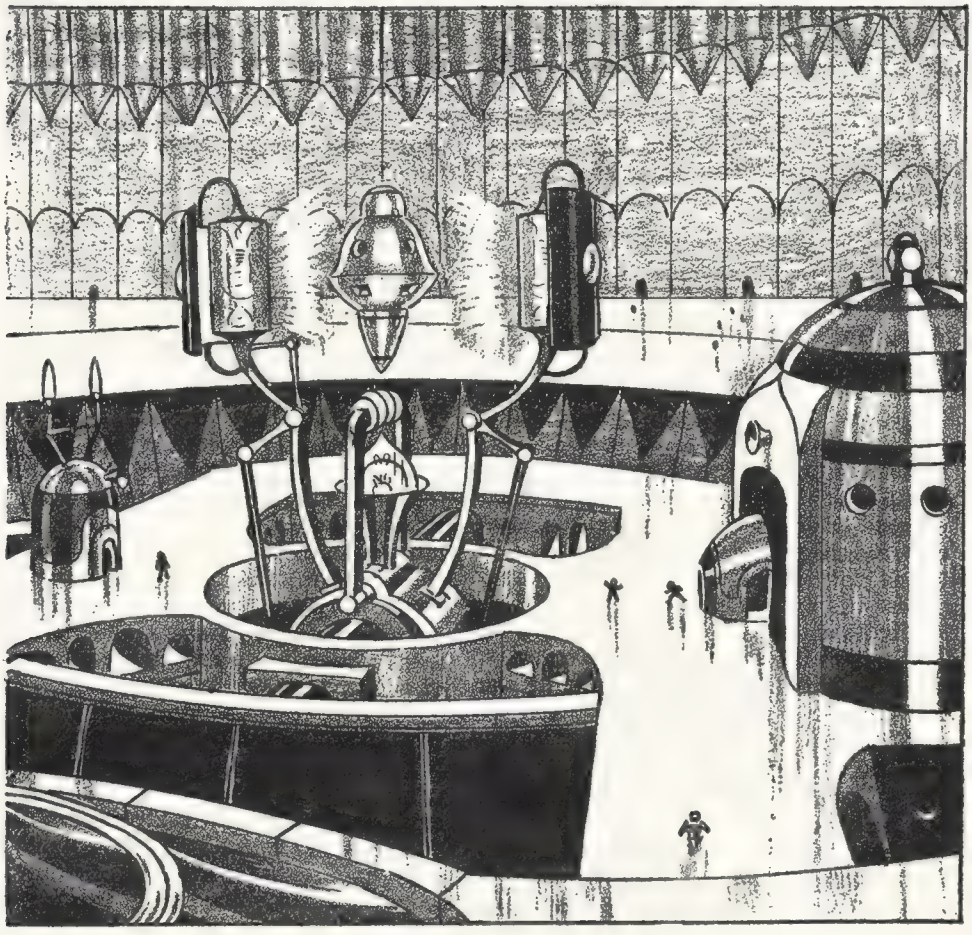
CHAPTER I

Men of Uk

KERRY JUSTIN, pilot LV-2 of the Interatomic Corporation, looked in puzzlement at his route-checkers. Up to now everything had been proceeding smoothly. He, his partner, and the machine itself had decreased steadily downward from Earth, had crossed the electronic gulf of space, had conformed exactly to all the usual influences of the *Dunsite* plates. There had been the same odd sickness and paralysis occasioned by the reduction. But now the small freight machine, carrying merchandise from Earth to Micropolis, was being drawn

An Earthman Descends Into Smallness When

the MICROCOSM



aside relentlessly by an immensely superior gravitational field.

Justin's gaze swung to his observation screens; his lips tightened as he beheld the cloudy, yellow world of Uk ahead of him. Planet of menace, bearing on its drably unpleasant surface the sworn enemies of Kraj.

"Say, Kerry, what do you make of it?"

It was Lance Albridge who spoke, the massive co-pilot of the machine and Kerry's closest friend. His pugnacious face was strained with sudden alarm; hairy fists were clamped on the switches of the propulsion engines.

"Damned if I know!" Justin still stared perplexedly into the screens. "This is the first time we've been detoured while heading for Micropolis. Normally there's little gravitational effect from Uk; this time we're being swung aside. The whole thing is obviously scientifically arranged. I don't like it, Lance! The Ukians are absolute devils according to all accounts. But why they want us heaven alone knows. Try your left-sector propulsion plates and see what happens. We might pull away."

Humanity is Imperiled by Atomic Invasion!

"O. K." Albridge's hands threw in the switches, then grasped the heavy steering mechanism. It moved easily enough; the meters revealed the surging of power—but otherwise nothing happened.

"Hell!" he gasped out. "Whatever it is that's dragging us has got our propulsor system licked to blazes! The limit of our power makes no impression at all."

Justin frowned.

"Better close your switches and cut the power out. No use wasting it. These Ukians are trapping us for some reason; perhaps they think they can get some information from us about the Krajians. If so, they've got another think coming."

With that he turned actively aside to the machine's defensive equipment, fingered the deadly molecular gun, major weapon of destruction, lovingly. If it was fight the Ukians wanted they'd get it!

Albridge cut off the power, then joined his friend by the observation screens. His blue eyes glanced at the deadly gun.

"Going to pepper 'em?"

Justin nodded grimly.

"If I get the chance, yes." Then he became silent again.

The machine, pursuing now a perfectly normal space flight, was traveling with ever increasing velocity toward the yellow planet. Far away to the right lay Kraj itself, a dark blue ball in the infinity, receding as the distance from it increased toward Uk.

The two men stood silent, waiting tensely, staring into the observation screens. As yet it was impossible to use their weapons; the dense clouds of Uk shielded the planet's surface completely. Within twelve more minutes they were cutting through them. They stood, set-faced, waiting for the apparently inevitable crash—then to their infinite relief the ship suddenly slackened in its onward rush, lost speed rapidly, and finally dropped as lightly as a feather from the clouds to the atomic planet itself. A jerk, and then the machine was still.

Albridge glanced at the exterior instruments and took their readings.

"Atmosphere and density same as Kraj," he reported. "You stay here and use the mol-gun; I'm using my own weapons." He jumped over to the airlock and swung the massive-hinged operculum inward, gazing out on the landscape. Then he took down his magnetic gun from its holster and surveyed the scenery from the safety of the ship. Justin swung his gun around and opened up a firing sector in the wall, leaving free passage for the deadly radiations the moment firing became necessary.

Then a voice spoke, in a pidgin form of the Krajian language.

"Stand exactly where you are! Take your hands from your guns!"

Justin obeyed, turned to face the commander. Albridge's gun dropped with a crash. In silence the two stared, for the first time, at the men of Uk.

They were not unlike the Krajians—bulbous-headed, blue-skinned, and possessed of four arms. There were the same flapping gashes of mouths, the same absence of nose and hair. One large, faceted eye reposed in the center of the unearthly faces.

IN all there were six men present, attired in one-piece scarlet tunics, with bright belts loaded with scientific weapons and instruments about their waists. In each of their four hands they held deadly weapons of their own science, unlike anything the puzzled Earthmen had ever seen before, even on Kraj.

"What the devil is the meaning of this?" Kerry Justin demanded curtly, after a while, using the language of Kraj. "You have no right to waylay an Earth-Micropolis trading vessel!"

"It is not a question of right when the men of Uk desire something," the leader answered coldly. "My name is Kanos. You may know of me from our enemies on Kraj?" Justin nodded grimly.

"I know of you all right. They call you the celestial butcher!"

"Do they really? On that case you will be aware of the fact that our science is completely merciless, devoted only to achievement and ultimate destruction of the accursed men of Kraj. We waylaid you both for a very definite purpose—not because it happened

to be you in particular, but because you were the first to appear on the scene within the range of our magnetic plates. That was how we snared you here—artificial gravitation, or magnetism. We watched your progress, of course, by the very ancient method of spatial television. However, we have use for you both."

"By all the planets, if I could only—" Albridge began wrathfully.

"Silence! You are not dealing with brute force, but with science of a very high degree. One false move and you will be subjected to anesthesia — not death, because you are needed. Come here, both of you. The fourth dimensional machine which gave us entry to this vessel is about ready to reverse action and return us to the city. Stand here—instantly!"

With compressed lips the two obeyed. They knew better than to argue with the men of Uk. Hardly had they stood in position than the fourth dimensional machine reversed its influence and the two found themselves suffering sensations akin to those in a rapidly descending elevator. An opaque fog, vaguely luminous, writhed about them and their captors. When at last it cleared away they were within the central scientific laboratory of these strange and determined people. Towering above them was the shining mass of the fourth dimensional machine itself.

In silence they regarded the incomprehensible machinery, tried vainly to figure things out. A jab from the leader's weapon sent them moving forward. They paused at last in the center of the enormous edifice at a sharp command. Others of the race, as expressionless

IT WAS in 2742 that Professor Dunstan discovered the secret of interatomic travel. His metal, Dunsite, was the product of nearly fifty-five years of sustained research and, when subjected to various electrical fields, was found to be capable of reducing its electronic orbits to absolute minimum, bringing about a state of near coincidence between electron and proton. If necessary, this state could be continued indefinitely, beyond the annihilation of electron and proton into energy and into the next stage of electrons within electrons, a new-found condition of ultimate matter, existing within the released energy itself.

Everything within the influence of Dunsite decreased in proportion as the metal itself decreased, both organic and inorganic. Humans found themselves capable of sinking within a machine of Dunsite to a point far less than that of an electron—finding that electron to be a planet—by the process of the electrons of their own bodies merging, upon annihilation, into the second stage of electronic smallness. Beyond a brief period of unconsciousness there were apparently no ill-effects. Only weight was lost steadily as the size decreased, but since at the journey's end everything was found to be relative, there was little cognizance of this.

In 2750 the first interatomic trip was made from Earth. An immense unit, comprized within its massively shielded core, of an infinitesimal piece of potassium was used, and the first machine descended into its mysteries—to find a solar system of nine worlds, corresponding with the nine electrons of potassium, wherein the protonic nucleus became a sun.

Seven of the worlds were barren. The eighth, and principal one, was found to be known as Kraj, populated by a scientific race about equal with Earth, while the ninth planet—and nearest neighbor—known as Uk, was populated entirely by one-time denizens of Kraj, colonists, turned now to bitter enemies of their mother planet by the persistent influence of scientific achievement and desire for conquest.

So, between Kraj and Earth there sprang up trade and steady communication. The potassium unit was guarded with infinite care. Within the metal's confines were several molecular universes, but of them all, though they teemed with worlds, only Kraj and Uk appeared to hold life.

The Interatomic Travel Corporation came into being, possessing—on Earth—one Raymond Price as its chief engineer. The Corporation owned a large fleet of Dunsite machines, varying from passenger liners to scouts and freighters, all of them possessed of the necessary apparatus to sink into unknown smallness, in the state beyond electronic electrons even, should the occasion ever arise—which, so far, it had not.

Interatomic travel to Micropolis—as Earthlings called the chief city of Kraj—finally became as popular as old time world tours. Even the conquest of space, an accepted fact now for more than three hundred years, paled into insignificance. The interstellar spaces were known; but the microcosmic were not.

and hideous as their fellows, came from the remoter reaches of the colossal place as Kanos curtly summoned them.

THE two Earthmen waited tensely, fists clenched, as the beings gathered about them.

"If ideas for an attempted escape are forming in your minds you may as well dispense with them," Kanos remarked grimly, lowering his weapon. "You are being held to the ground by magnetic devices, similar, on a smaller scale to the ones which trapped your space machine. I believe you are aware that the Krajians are our sworn enemies? That they have so far beaten every effort we have made to subdue them?"

"Go on!" Justin snapped. "Get it over with, can't you?"

"We realize the impossibility of trying to beat the Krajians by ordinary methods. The only way is to learn all their plans by secret methods. To that end we have studied the manner by which your ships cross from the big to the small and have succeeded, by duplicating the system in living beings—ourselves, in narrowing down our own bodies to infinitesimal proportions. Further, our bodies, when treated by various antitoxins, can live in human blood—which, of course, is a mixture of water, fibrine, albumen, phosphates and so forth. Our size can be decreased so that we become smaller than blood corpuscles themselves. You will realize thereby how many of us could be encompassed within two human beings the size, say, of you two!"

"Good God, you don't mean—" Albridge began hoarsely.

"I mean that you two will be used to carry some fifty thousand of our race back to earth in your bodies! Your normal blood will be drained off and a substitute supplied, in which our microscopic race will live. Your bodies will live long enough to take you back home, but your minds will be dead to your normal will. Therefore, hypnotic orders will be impressed on your brains before you leave. When you arrive back on Earth your bodies will burst asunder, mainly because the artificial blood you will be supplied with will at that period, become highly oxygenated and thereby explode, releasing our fellows. They will escape, unseen, each in possession of their own normal willpower."

"But your purpose behind this ghastly idea?" Justin demanded thickly.

"Our purpose? Simple enough. Thousands of people travel every Earthly month between Micropolis and Earth. These people will have one of our number inside, all unaware of the fact, commanding their brains what to do. They will quarrel with the Krajians and precipitate, no doubt, a war. On Earth we shall set men and women against each other by the same method and make them exterminate each other. Ultimately, when the human race is wiped out, we shall take over control, thereby gaining both Kraj and Earth. Other Earthmen will be snared down here as you have been to take still further supplies of our fellows to continue the work on Earth; still other Earthmen will be captured as you were and used for vivisectional purposes. That is highly necessary, so that we can study earthly organisms and learn how to convert ourselves when the time comes for us to control Earth as well as Kraj. You understand?"

"You can't do it!" Albridge shouted desperately. "It's massacre—hypnotic massacre!" He struggled desperately and futilely to break free of the magnetic radiation pinioning him. "You can't, I tell you!"

"The operation will proceed," Kanos announced implacably, and made a motion to his assembled men.

The magnetism was released and the two Earthmen promptly seized. They gave a brief but futile account of themselves, then they were whirled helplessly toward the opposite end of the laboratory.

Without pause they were taken to two of a series of operating tables and there strapped immovably upon them. They shouted, they cursed, they strained muscles and thews to the uttermost, all to no avail. Then anesthetic cones were clapped over their faces and their senses reeled into unconsciousness.

With the same ordered precision, Kanos directing the proceedings, the surgeons moved to an immense transparent bowl filled with blue fluid, and rapidly connected to it a series of immaculately clean pipes, all leading to one main nozzle of glitteringly bright metal. Within the bowl, reduced to infinite smallness, alive and healthy within the elements of human blood—blue only because of the highly oxygenated content—reposed the fifty thousand Ukians.

"Proceed!" Kanos ordered impassively, and immediately his assistants prepared for action, laid their gleaming scientific instruments on the tables.

DRAINING tubes were placed into position, surgically spotless drains were opened in the floor. Then the operation began, proceeded with steady, skilful speed that betokened the supreme knowledge of these master surgeons. First the hearts of the two Earthmen were removed and transferred to a machine filled with solution, in the depths of which they continued to beat steadily, supplied by artificial arteries.

Once this was done every drop of blood in the two men's bodies was drained off through the tubes and down the grids, afterward being replaced by seventy-five percent synthetic blue fluid from an enormous nearby tank, and the remaining fifteen percent made up from the contents of the bowl. Then the hearts were replaced, skilfully reconnected, and set beating. The incisions instantly healed under powerful solutions. After being treated with strong stimulants Justin and Albridge began to stir slowly out of unconsciousness.

Presently their bleary eyes swung to Kanos, but in their respective gazes there was no trace of recollection. They were hardly even conscious of the fact that they were alive; their minds were completely in the grip of the master of Uk.

"Understand, Earthmen, that you are merely motivated machines—flesh and blood instruments of our purposes," he said implacably. "Within each of your bodies are twenty-five thousands of our race. You will drive them to Earth. That is all. Release them!"

The straps were unbuckled. Dazedly, heavily, the two got to their feet and stood momentarily passive, then they turned and walked mechanically from the laboratory, walked steadily through the various corridors and at last into the open. Straight as dies, eyes fixed in front of them, they moved toward the spot where the freighter atomic machine lay in the yellow grass of this strange and terrible world.

Still with the motions of automatons they passed within the machine through the open air-lock, closed it, then moved to the control board. Within a few minutes the ship was hurtling upwards towards the yellow clouds, passed through them, and onwards into the intra-atomic space, driving steadily back toward Earth with the queerest menace that had ever arisen from the realms of the infinite small.

CHAPTER II

Murder Lust

RAYMOND PRICE, the young engineer-in-chief of the Interatomic Corporation, looked up sharply as the warning arrival gong suddenly rang stridently.

It was the signal for his sub-engineers to get busy immediately and obey his orders. He turned to the microphone connecting him with the instruction loudspeakers dotted in various parts of the mighty terminal building — perhaps one of the most strangely designed buildings on Earth, and gave brief, pointed orders.

The terminal's dimensions were staggeringly large, seeming more so by reason of the emptiness of the place. Price's position, within a small raised building not unlike a railway signal box, commanded a view of the entire place in all directions.

Running on either side of the vast sunken pit from which the atomic machines departed and arrived, were the

platforms, while in the center of the pit, automatically controlled, lay the priceless potassium unit containing multi-atomic universes, wherein lay the worlds of Uk and Kraj.

The arrival gong, actuated by electrical repercussion when a vessel was on the borderline of departure or arrival, was the signal for the unit casings to be slowly sunken into the metal floor. As they sank a blurry, misty speck came into being, gradually taking form, appearing from microscopic size to full dimensions, until, within five minutes of the gong's ringing the atomic freighter merged from tininess to its complete size. Price frowned as he surveyed the machine, then turned to his nearest assistant.

"Say, what in hell is 45-Z doing back so soon? Should be tomorrow."

"Right enough." The assistant surveyed the schedule sheet. "Fourteen hours forty tomorrow."

Price said no more. He left the controlling office at a run and hurried along the platform. The door of the ship was already opening and Kerry and Albridge came staggering out. Price stopped dead; the workers about him shouted in horror.

"Kerry!" Price gasped hoarsely, staring at the glassy-eyed wreck who had so jovially departed not fifty hours before. "Kerry! Lance! What on earth has happened to you?"

Neither of the two answered. Instead they seemed to grow larger! An expression of misery, the dumb, speechless misery of a tortured animal, was on their faces.

Price gripped Justin's wrist, then fell back astounded. It was no solid flesh he touched; instead a bloated mass like an inflated bladder. He stared unbelieving,—then stepped back in sheer horror. The two men were still enlarging, and—suddenly and amazingly both of them ripped asunder!

Their flesh tore like rotten rubber, stripped to the bone. The purple fluid that had taken the place of normal blood gushed out in a flood, poured along the platform and into the unit-pit. Albridge's mighty form staggered, collapsed limply. Not a second afterward Justin followed suit. His body, a mere bag of bones draped with crinkled, deflated flesh sagged heavily over the platform edge and vanished in the pit itself.

"God!" Price breathed, sickened and nauseated. He looked about him helplessly, then down at the spreading pool at his feet. With a sudden terrific effort he took possession of himself. "Quickly!" he ordered. "Express ambulance! Send orders for the Atomic Patrol to make immediate investigation of all atomic ways leading to Micropolis! Something is devilishly wrong."

Activity swept into the startled group, Price himself in the midst of it.

He hardly remembered how he got through the remainder of the day. The horror of his friends' deaths and the mystery behind them was still dinning through his brain.

The purple fluid was cleared away after investigation; it revealed nothing. The remains of the two men were rayed out of existence, and the Atomic Patrol set off to investigate. But it was too late then. The fifty thousand invaders were already abroad, released from their incredible transport, putting into action their subtle, unseen plans for the conquest of two worlds.

THE Atomic Patrol never returned. What fate it encountered in the unknown spaces of the small could not be imagined, and indeed Price had little time to conjecture. Something was already strangely amiss in the usually perfectly running methods of New York. In three days a change had come about.

From every quarter of the city came news of inexplicable happenings, of genius changing to insanity, of love turning to hate, of men and women doing things they normally would have shuddered at. Some malevolent and unknown disease was infecting the heads of industry and power and yet, so far, mysteriously missing the masses. Always it started in the same way, by a peculiar cut occasioned somehow on the flesh, followed by a strange mental metamorphosis wherein the victim lost all touch with himself and instead became guided, apparently, by an infinitely stronger will than his own.

In consequence of these vast and ter-

rible changes ordered routine and method began to crumble at the foundations. Price in particular found himself totally unable to keep track of his schedules, or of the departure and arrival of vessels. Everything, it seemed, had gone abruptly mad. People were leaving New York by the thousands, nearly every hour of the day and night. Some came back and burst in the same horrible fashion as had the two pilots. Others never came back. Pilots refused to take orders; they were clearly immovably mesmerized. Price tried to interfere and narrowly escaped violent death. Desperate, he appealed to the Government, with no result. The rulers of the country were as criminally insane in their methods as all other controlling bodies.

Business came to a standstill; crime flourished as never before. Time and time again Price tried to figure the riddle out, sent messenger scouts to Micropolis, demanding to know the reason for it all, but the messengers never returned.

Then the strange malady spread to England and that indeed started disaster in real earnest. For no reason whatever, apart from the sheer desire for murder and death, the British decided to war with America, so there began the most fiendish battle of extermination in Earthly history. The masses themselves, unaffected in the main by the disease, as yet, were all against it, but the iron control of their blood-mad leaders forced them into the war before they could realize what was happening. And, after a day of two, Europe added her forces to the struggle.

In less than a week after Justin's and Albridge's mysterious arrival from the atomic universe the world was madly at war; the masses were now infected with a craving for slaughter and battle.

Finally, forced out by brute control, Price gave up the task of trying to govern the destinies of the Interatomic Corporation, but he did wonder why nobody, for all their insanity, endeavored to attack the potassium unit. This always remained untouched. His mood was bitter, resentful. On the following day he had to join up and add his small share to the unreasoning chaos.

"The thing's so—so sudden!" he declared feelingly to Irene Edwards, his fiancée, while having cocktails with her at her modernistic apartment in the smart quarter of the city. "Something has happened out in intra-atomic space to cause all this, but I'm damned if I know what. I've seriously thought of taking one of the emergency ships and finding out for myself. So far nobody seems to know about those, and I'm the only one with the lock combination."

"And why don't you?" the girl asked, her steady dark eyes upon him.

"Because I realize I wouldn't stand a chance," he replied moodily. "If the whole Atomic Patrol has failed what good could I do? Alone? Besides, what would be the use? War is here! Before I could learn anything and get back the world would be destroyed!"

IRENE said nothing, but her dark head inclined in acquiescence.

"There's so many things I can't understand," Price went on worriedly. "The way the machine pilots behave, for instance. They've been smitten with this disease, too, yet it hasn't changed them into criminals like the rest. Instead they simply go on as before. The only difference is that they won't obey orders and tirelessly go on driving machines to the atomic universe and back again, presumably to reach Micropolis. Thousands of people will be gone by the end of a month—if there is any humanity left by then. But what is it all for?"

"Are you sure it is Micropolis that's behind all this?" the girl asked quietly.

"What else can it be?"

"But it's against their interests to quarrel with Earthmen. What about the rest of their system? Uk, for instance?"

"I've thought of that. It's the only other planet populated—but they'd never attack us in this fashion. They want to overthrow Kraj, yes—but not us."

"Suppose, though, that they've somehow overwhelmed Micropolis and are striking at us with a view to future conquest, or something of that sort?"

Price shook his head slowly.

"No, that doesn't fit in somehow. The people of Kraj are far ahead of those of Uk in any case. You know that as well as I do." He stopped and shrugged. "I guess there's nothing we can do, Irene. I'm on the verge of joining up, and you're to be in the women's section the day afterward. It's the parting of the ways. And to think we reckoned we'd outlawed war for all time!"

THAT same night, just after eleven o'clock, war came into the heart of New York.

Although the populace had to some extent been expecting it, they were certainly not prepared for such a terrific display of military power. Overhead fleets rained bombs on the metropolis; below, invaders were surging in a mad, murder-driven multitude through the streets. The air was hideous with the din of heavy artillery, the roars of motors, explosions and disintegrators, and the yelling of human voices.

Even more incredible was the fact that this insane tide was not sharply defined into attackers and defenders. Both were mixed up together, each fighting the other. Americans were slaying Americans, and British, Britishers. The thing was mad, an all-consuming lust for slaughter without sense or reason.

Price, who had left Irene's apartment not an hour before the major drive, was packing his clothes for the next day's departure to the war when the sounds of battle reached him. The girl was the first concern that flew to his mind. He must find her—rescue her from the insane mob before they tore her limb from limb.

He swung away from the window, then staggered slightly at a sudden wave of intense giddiness. Almost subconsciously he looked down at his hand; it was smarting sharply. Funny! He hadn't remembered scratching it like that. The blood was oozing gently from a long incision on his thumb. Subconsciously he knew that he had been stricken down by the mysterious disease, but so rapidly was his mentality being overcome by the force of the minute creature that had entered his body, he was losing a grip on his normal will.

In the space of fifteen minutes he was no longer the normal Raymond Price, but a murder-mad fiend like the rest of the swarming hordes. He still realized he must find Irene—but not in the same fashion as before. He must find her, yes—and exterminate her. Not only her, but everybody who got in his way!

This was the only thought in his mind as he left his apartment and went through the main streets toward her home. Furiously he battled his way through the hordes of people surging in the roadway outside, people armed with knives and all the dangerous implements they could lay hands on. Twice he barely missed destruction, then he reached the vicinity of Irene's apartment. About the place surged swarms of yelling, armed men and, in the midst of them, along with many other hapless men and women, Irene herself, held in an iron grip.

Her clothing was torn and rumpled, her dark hair disordered. Her expression of utter terror changed when she caught sight of Price's blood-streaked figure before her. Her eyes lighted with sudden hope.

"Ray!" she shouted hoarsely, striving vainly to tear free from the merciless grip on her arms. "Ray! Save me! They're taking me away—to Micropolis! I must— Oh, Ray—" She fell forward, jerking and straining.

Price grinned ghoulishly at her, leaped toward her. Whatever it was that was in his mind—and probably it was murder—never materialized. Something struck him violently on the head and he pitched helplessly into darkness.

CHAPTER III

Yuk

PRICE came to with an aching head, looked about him in the damp darkness of early morning.

The yelling hordes, the massacre of the previous night, had ended—or else passed further westward. The sky was free of planes; the bombardment had ceased. In the waxing light he beheld

the corpses of slain men and women, shattered buildings, gaping craters in the road. As he got weakly to his feet it came to him that his escape had obviously been because he had been believed dead and not merely stunned.

His hand went to his still slightly bleeding head; he winced painfully. Then suddenly, like a pouring tide, he remembered what had happened—his insanity—Irene's desperate pleas—the blood-mad devils who had captured her. Micropolis!

"God!" he breathed huskily. "Irene! Taken by those butchers!"

He did not hesitate another moment. He turned and sped through the corpse- and debris-ridden streets toward his own apartment house. He found it had escaped the bombardment but was empty of people.

With pounding feet he went up the staircase to his room, and entered. A decisive plan was in his mind. He would bathe his wound, dress in fresh clothes, then head for Micropolis in one of the fast emergency machines, granting they hadn't already been discovered in their private hangar adjoining the terminal building

Hastily he began to bathe his wound in cold water, wincing at the pain. Then as he wrung out the rag into the bowl he stared in astonishment. The rising sun played directly upon it and revealed, amidst the water and crimson blood streaks, an inconceivably tiny object making desperate efforts to gain the bowl side. For a moment he mistook it for an insect, then as he looked closer the rag dropped from his hand in utter amazement. It was not an insect but an incredibly small four-armed being, obviously washed from the wound on his head.

Immediately the scientist in him came uppermost. He jumped across to a case of instruments and brought out a microscope. With infinite care he scooped the object up and laid it on a slide, then peered at it amazedly. Under the power of the lenses it was now clearly visible—it was a still living creature, not unlike the Krajian race, and obviously on the verge of death. It was manifestly severely wounded, evidently had been hurt by the vibration of the blow that had cleaved Price's own skull. At that instant it had been in his blood stream almost upon the spot where the wound had been inflicted. Then, washed into the bowl, the shock of the water had brought it back to momentary life again.

"Not a Krajian, but an Ukian!" Price muttered, his eyes narrowing. "I'd know one anywhere."

Viciously he squeezed the luckless creature into extinction beneath finger and thumb, then gave himself up to brief thought. Slowly, gradually, the immense purpose behind this strange invasion began to filter into his mind. Piece by piece, as the moments slid by, it all became clear to him.

Every person that had been afflicted by the strange disease must, then, have had one of these devilish Ukians inside him! That explained the mysterious cuts just before the disease started—obviously they had been caused by the Ukians themselves, no doubt with tiny instruments. It also explained the nauseating body-burstings.

"Am I lucky!" Price breathed at last, straightening up. "I'd never have found it but for that blow last night. Obviously when the little devil was half killed his influence over my brain failed, otherwise heaven knows how far I might have gone. Of all the damnable ways to win a war! But what's it all for?"

He couldn't fathom that point. His mind swung back to Irene. Grimly he resumed his interrupted bathing, then changed and made for the emergency hangars.

As he had hoped the emergency hangars were untouched. The massive doors were closed as securely as they had always been. Rapidly he swung the dials to the required combination numbers, then flung the doors wide. Without a pause he headed for the foremost machine, entered, and closed the air-locks.

THE engines started up reassuringly enough under his touch at the controls. Quickly he drove the machine forward on its land wheels and soon covered the brief distance into the main terminal building. An intense fear was in his heart that perhaps

the priceless potassium unit would have been destroyed in the air raid of the night before, but to his infinite relief he found it still there, sunken deep into the pit. Evidently the guiding minds behind the onslaught had taken care to prevent anything happening to the one spot wherein lay their universe.

Price paused only long enough to make the necessary calculations on how far away he would be from Kraj when he had descended into the infinitesimal—for he was starting this time from a point some ten yards away from the potassium unit, which in the aggregate would total up to millions of spatial miles. He debated too, whether he ought to visit Kraj or Uk, then remembering Irene's words about Micropolis he decided on the former, though he had a distinct feeling that the Ukians alone were to blame.

Satisfied at last he threw in the main switches and watched the mighty building grow incredibly vast about him.

He was seething with impatience as he drove steadily downward. Every second of the trip, which usually occupied eight hours, seemed to him an infinity. The only relief he obtained was when the unconsciousness of transit to the ultra-small claimed him for a brief period. Then he was alert again, expecting danger, expecting every moment to be wiped out of being as had those of the Atomic Patrol. But gradually, as the time for the journey's end drew near and nothing unexpected happened he began to realize why it was so. He was not taking the normal route to Micropolis!

He was pursuing a track some eighty thousand miles away from it, which was due entirely to his different starting point. Whatever it had been that had presumably destroyed the Atomic Patrol fleet had evidently been set directly in the normal route, and he, by means of his deviation, was missing it. Convinced this was the case he made an even wider detour to gain Kraj, reaching it finally from the north cosmic point instead of the south. And at last he dropped gently on the main landing ground of Micropolis itself.

To his astonishment, upon alighting from the machine, he beheld a veritable sea of atomic fliers waiting as though for a given signal. Silvery, snub-nosed vessels gleaming under the blue-white effulgence of the sun, actually the nucleus of the potassium. For a while he stood looking at them in puzzlement, noting the busy figures of Krajians teeming about them, then, after a glance upward at the cloudy yellow world of Uk, some 200,000 miles distant, he made his way rapidly to the main administrative building.

Yuk, ruler of Kraj and master of Micropolis, was just descending the broad steps of the building in company with his immediate advisers as Price prepared to mount them. They met halfway up.

WITHOUT hesitation Yuk made a quick signal to his men and Price was firmly seized.

"So, my friend, whoever you may be, you Earthmen have turned traitors?" Yuk inquired bitterly, his single eye glowing malevolently. "You send us cargoes of Earthmen who try to learn our innermost secrets and attempt to destroy us! We thought better of Earthmen than that! You see those machines assembled there? We are ready to launch our attack to exterminate every living being on Earth. Normally we are not a warlike race, but this time it is different. It is clearly them—or us!"

"But—but you don't understand!" Price gasped hoarsely. "Listen—I beg of you! We on Earth have nearly all been slain by warfare! Only a few hours ago I discovered that it was caused by a microscopic being—an Ukian, controlling our minds by living in our blood streams. Thousands upon thousands of them have reached Earth recently. The whole thing started with Kerry Justin and his partner Albridge. You remember them? The pilots of Freighter LV-2."

YUK'S immense eye revealed that he was thinking. He made a motion and Price was released.

"Tell me more!" he ordered.

Quickly and concisely Price went through the whole story, and when he

had finished Yuk's eye was filled with a devouring hate.

"I see it all now," he muttered. "This is clearly the work of those accursed Ukians—a clever attempt to destroy not only us but Earthmen as well—to gain control over both worlds. On your world they set Earthmen at each other's throats. Others they send ostensibly to here, but waylay them on the journey. During the waylaying process they place one of their damned spies in human bodies, then the humans continue their journey here, finding out all they can by the dictates of the miniature beings inside them. By this they accomplish the dual move of learning our secrets, for naturally the Ukians waylay them on the return journey—and also they have excited our hatred against Earthmen for we, finding out, have believed Earthmen to be at fault."

"That's exactly it," Price nodded in relief. "There's one other thing, though. Earthmen don't return to Earth once they've left it, or if they do it is only to burst and release more of these microscopic spies. It can only mean that those who don't return are incarcerated on Uk, or else something decidedly worse. I'm seeking Irene, my betrothed. I understood she'd been brought here. Evidently she was under a misapprehension, or else had been deliberately led to believe the wrong thing. She must be on Uk, and if I tear the whole infernal planet in pieces I mean to find her! Granting, that is, that I'm not too late. If I am—"

Yuk's immense head slowly nodded.

"I understand. Your coming here has cleared up many things we did not fathom; why we could not get any news from Earth, for one thing. We shall now change our attack from Earth to Uk. We leave immediately!"

Price nodded eagerly.

"I'm with you, Yuk. I'll use my own machine. You lead and I'll follow."

CHAPTER IV

Avengers of Kraj

WITHIN ten minutes Price was back again in his machine, waiting tensely at the controls, watching as the immense Krajian fleet rose in orderly formation into the air and streaked rapidly toward the sparse clouds. When at last they had all gone, a vast and avenging armada, he shot upward in their wake, hung closely to the tail of the rearmost machine.

Uk, yellow world of peril, was clearly visible the instant the atmosphere of Kraj had been left behind. Already the trifling 200,000 miles distance was decreasing. The Krajian fleet broke up

[Turn Page]

HIS NIGHT CLUB BILL WAS $62!

"Goodbye, Sir" . . . "Thank you, Sir," says the head waiter fervently, as the little party of four leaves the club. And why shouldn't he—for a $10.00 tip?

Think that's unusual? Not a bit of it. Young men are making lots of money—and spending plenty—these days. Young men full of health, full of snap and power. And you can bet your bottom dollar that these men watch their health like a hawk—that they see to it that their bowels move regularly. For no man can feel right and do his best if he is held back by the curse of constipation.

So if *you* want to step up your energy, if *you* want a quick mind and a vigorous body, remember this one thing and never forget it—*see that your bowels move regularly!*

But the way you move your bowels is important. Instead of taking a laxative that disturbs your system and upsets your stomach, take gentle Ex-Lax.

Ex-Lax limits its action entirely to the intestines, where the actual constipation exists. It gives the intestines a *gentle nudge,* emptying the bowels thoroughly—but easily and comfortably. Ex-Lax works in such a simple, common-sense way. And it is such a pleasure to take. Ex-Lax tastes just like delicious chocolate. At all drug stores—10c and 25c. (In Canada—15c and 35c.)

into sectors, linked together by spatial radio. Only one machine remained in the forefront—an empty machine, controlled remotely by Yuk himself—the point ship of the armada. It was as well the ruler's foresight had led him to adopt this method, for suddenly and mysteriously, when the halfway line between Uk and Kraj had been gained, the machine jolted violently and rebounded back into space, gradually dissolving into molten metal.

"To the left!" thundered Yuk's voice, clearly audible in Price's own loudspeaker. "Electric barrier! Bear left and bring on neutralizer rays—frequency nineteen. Only way to get through. Prepare for recoil."

Price smiled grimly to himself.

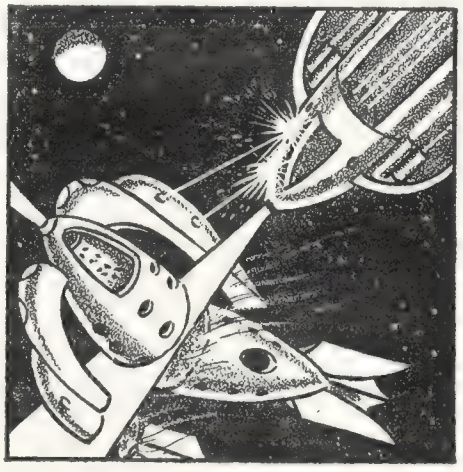
"So that's where the Atomic Patrol went to!" he muttered. "Electric barrier that shatters the construction of a ship and changes it into energy. I guessed at something like that. Only removed when necessary, I suppose."

True to orders the fleet turned aside, but only for a while, then space was alive with emerald green rays, hurling their stupendous power — technically known to the Krajians as frequency 19 — at the invisible barrier. So far as Price could figure out the rays were duplicating the same power as the barrier itself, working on the principle of like repulsing like. Whatever it was, beams stabbing the infinite, the machines swept through the invisible wall and went streaking onward toward the yellow planet. Price himself, having no such rays, slid through under the ray protection of the last ship.

Evidently, however, the smashing of the barrier had warned the Ukians what to expect, or else they had already seen the invaders through their high-powered telescope and had machines ready for action. The fact remained that from Uk's yellow surface there suddenly began to spew a fleet of gleaming space machines, villainous energy-rays faintly visible against the ebon dark of infinity.

Price set his lips as he clenched his controls. He wished he had an assistant to aid him. The machine was equipped with deadly weapons enough, all controllable from his main switchboard, but none the less he realized he would have all his work cut out to carve a way through the horde and give battle at the same time.

Tensely he watched the opening attack, saw Krajian and Ukian ships swarm into conflict. Infinity blazed with light as two machines cannoned into each other, to sink back into dripping debris gravitating about the whole ruptured mass. The combatants were pretty nearly equal, but the scientific power was on the side of the merciless Ukians. Time and time again their disruptive radiations stabbed out into space, flicking pieces off the Krajian machines and, more rarely, annihilating them altogether.



For quite ten minutes the swirling chaos continued, then Price found his attention forced away from the observation screens as one of the machines suddenly made a direct dive toward him. Instantly he dived downward, held his breath, and shot beneath the very belly of the hurtling monster. An energy ray peeled the top plates off his vessel like skin from an orange. His eyes narrowed as he clutched the molecular gun, most deadly weapon in Earthly science.

He swung around again, circled warily, and dodged another attack of rays. Then he maneuvered until he had the invading machine dead across the sight of the gun. The Ukian vessel, by far the clumsier, struggled mightily to

swing to one side, and indeed had half succeeded when Price, eyes shining like steel across the sights, pressed the firing button.

INSTANTLY the terrible weapon shot back on its powerful springs with the recoil. The opposing machine, being on one side, half vaporized—belched outward in a tumbling mass of rending, dripping metal, the molecules of its formation utterly blasted into a gaseous state. But the remaining section, a conical hulk, floated lazily away, those in its interior only saved from instant death in space by the automatic compartment doors.

Price swung his gun again to finish his task, then paused. Within that hulk there would undoubtedly be some men left. They might know where Irene was! Hardly had the thought passed through his mind than he switched on the twin space anchors, hooked the derelict to his own ship, and set off for Uk at top speed.

His journey took him around the edge of the battle, the most desperate journey he had ever known. Time and time again pieces of his machine were torn away; once the vessel was hit so hard he thought it would crumble in pieces, then he realized it had only been a reflected beam and not a direct one.

So, little by little, edging his way around, only sparing himself time enough to note that Yuk was slowly and resolutely gaining the upper hand, mainly because of the swifter nature of his machine, he circuited the space battle and ultimately gained the dense clouds of the Ukian atmosphere. Then only did he slow down, switch his gravitators to full strength, and draw the hulk into contact with his own machine.

Grimly he flicked on the radio transmitting equipment.

"Ukians!" he snapped into the microphone, using the Krajian language. "Do you hear me?"

A pause followed, then an Ukian's halting voice answered.

"We hear!"

"Good! Now listen to me! You will answer a question. If you do that I will spare the lot of you; if you don't I'll blast you clean to hell. I'm seeking the Earthmen who were snared to your planet—one in particular, a woman by the name of Irene Edwards. Tell me where she is and you will come to no harm."

There was a long pause, then the voice resumed.

"We don't know the particular Earthling you name, but we do know where they all are. It is the plan of Kanos, our master, to examine their various organs, to find how best to convert ourselves when we take over Earth—"

Price became desperate with sudden fear.

"Where are they? Blast you to hell, *where?*" he snarled.

"In the prison adjoining the surgical laboratories."

"O.K. We'll head for the place and you'll direct me as I drag you along. I'll let you go when I'm sure you've told the truth.

Savagely he turned aside and flung in his switches once more, dropped through the clouds at a dizzying rate. Then the tremendous city of the Ukians burst into view. The voice of the Ukian within the derelict spoke at intervals, directing the course, until at last Price beheld the enormous prison and laboratories stretched in a two mile enormity below him, apart from the main city's curious, straddling reaches.

"Right!" he snapped. "Now we'll see if you're telling the truth."

He dropped down within three hundred feet of the crystalline roof. Staring through the floor observation plates he distinctly beheld below him the vast hall of science and, more dimly beyond, close banked masses that he assumed were Earthmen! Evidently the Ukian had spoken the truth.

Satisfied, he swung away, swept five miles southward with devastating speed, and there dropped the derelict. With a grim smile he switched on his molecular gun and cut a two hundred foot deep chasm all the way around the wreck, marooning the Ukians completely as they suddenly poured from the hulk in an effort at escape. Then, cutting the power down, he half melted

the derelict and left it there, satisfied that the beings could not give any warnings, either by radio or personal touch.

AS HE flew close to the laboratories again, Price put his pre-devised plans into action. Quickly he moved his minimizing switches, waited while he and the ship contracted to the uttermost limits, shrank down to the electron within an electron state. As the process proceeded he lowered the vessel slowly, waiting until at last it was tiny enough to pass through the enormous tunnel which actually comprised the airlet hole of a roof ventilator.

Gently he eased the machine through, then stopped the decreasement. He burst at last into the stupendous immensity of the laboratory, unseen and silent, no larger than a wasp. Grimly he looked about him.

On every hand were giants, colossal Ukians as they appeared, proceeding with their vivisection operations, so intent on their tasks they never even glimpsed the tiny cylindrical flyer zooming swiftly over their heads.

Price shuddered at the things he beheld. Twenty-four operating tables were in action, and upon them lay Earthmen in various stages of vivisection — some dead, others mere butchered mounds of flesh craving for the extinction that was mercilessly withheld.

Hopefully Price searched the area wherein further Earthmen were waiting for experiment—colossal men and women they seemed, jammed tightly together within the monstrous cage of a prison. Price went high above them, peered down on their enormous, terror-stricken faces, but he failed to behold the features of Irene. The thought that she was perhaps already dead or torn in pieces by these inhuman fiends sickened and stupefied him for a moment; then he went on again, ceaselessly, desperately, following the line of operating tables.

Abruptly his breath caught; he stared fixedly into his observation reflector, trained on the seventh table. There was the girl herself, conscious, utterly overcome with fear, strapped down by a massive leather harness. About her, arranging their instruments for action, were the Ukian surgeons.

"Irene!" he shouted hoarsely, only to realize she couldn't possibly hear him.

Fiercely he swung the miniature machine down, swept over the hill that comprised the girl's supine body, dropped, then maneuvered around to face the chief operating surgeon—Kanos himself, had he but known it. With rapid movements Price focused his molecular gun and pressed the button. Being reduced in size its area of efficiency was likewise shortened, but none the less its power was just as devastating on a small scale. The beam, no thicker than a lead pencil, stabbed into the enormous face of the ruler of Uk, drove clean into his single eye and through it into the depths of his fiendish brain.

He dropped without a sound, stone dead.

Irene twisted her head about; her eyes seemed the size of lakes as Price shot over her face like an angry wasp. The surgeons turned, astounded, tried to locate the hovering, darting terror—but on account of its small size they were utterly unable to catch it with their flailing arms. Time and time again its vicious molecular gun stabbed out, tore pieces out of the men, blinded them, killed them.

No larger than an insect, and yet it wreaked death and havoc everywhere it touched.

Pandemonium spread over the laboratory. The surgeons raced up and down desperately, tried everything they could to wipe the machine out. They realized now what it really was. Price went on grimly, waited until he had at last forced all the Ukians into a corner of the immense place; then he gradually enlarged the size of the vessel to normal. It grew steadily, filling all the space, spreading outward, smashing down instruments, finally reaching up to the ceiling.

"Listen, Ukians!" Price thundered, connecting the external loudspeaker. "I've got the lot of you in a corner and you can't get out. One move and I'll blast the lot of you."

CHAPTER V

Return to Earth

THE trapped surgeons said nothing, could only look futilely at the enormity of curved, shining wall hemming them in. They realized clearly that the Earthman would carry out his threat without hesitation if necessary, so they waited in sullen silence.

Price exited the machine by the opposite door and raced across to the pinioned girl. In an instant he had her free, gathered her to him tenderly.

"Ray! Oh—Ray—" Her voice broke huskily; then from sheer reaction she fainted dead away. Quick as a flash Price swept her up in his arms, laid her carefully on the ship's wall bunk, then returned to the cage. In a moment he had the clamps unfastened and released the Earthmen in a shouting, joyous flood.

"Any others?" he asked curtly, and a tall, bald-headed man stopped to answer him.

"Butchered," he said hoarsely. "We're all that's left. Thank God you came."

"Never mind that," Price interrupted. "I had a personal reason. We'll have to release these others and give those poor butchered devils over there a quick dose of lethal gas. They're beyond hope. We'll need a fleet of ships, too, to get all of you back to Earth."

He paused grimly and edged back toward the vessel as the surgery doors suddenly crashed open. Tensely he waited, then relaxed. It was Yuk and his men—a victorious mob. The Krajian paused at last as he beheld Price.

"So you succeeded too!" he exclaimed in obvious delight. "Splendid, Earthman! We finally overcame the Ukian space-fliers — their ships were too clumsy. We have the city guarded at every point; twenty space machines are hovering with disintegrator rays ready for action. I left this building untouched when I discovered its nature—realized you would rather have it that way. The victory is ours, my friend." He paused and looked about him. "The surgeons?" he asked in surprise. "What has become of them all?"

Briefly Price told him.

"They are prisoners," Yuk announced grimly. "Bring them forward. We will attend to them."

"First I want something from them," Price answered quietly. "I want an antidote by which I can kill their miniature spies within human beings without harming human beings themselves. There must be something."

With that he turned aside, entered the ship, and threw open the opposite air-lock. Covering the surgeons with his ray-gun he forced them through to the surgery.

"We heard your request, Earthman," one of them remarked. "You want an antidote. If we provide it will you allow us freedom? Freedom to visit other worlds and leave Uk behind?"

"It is not in my power to give you that," Price returned. "I want an antidote and I mean to have it. You are Yuk's prisoners, not mine. It's up to him."

"Your request is granted," the Krajian ruler said calmly. "Give the Earthman what he desires."

The surgeon turned aside and extracted a metal sheet from a complicated filing cabinet. In silence he handed it to Price.

"That is a method we invented in case we had need of it," he said after a while. "What we have done we can also undo. Follow out those instructions, build the required generators, and you will be able to disseminate an electrical field which will apparently paralyze human beings for a brief period. What really happens is that mild electric currents pass through their bodies. On account of their size they can stand it, but to the infinitely smaller Ukians imprisoned within them it will be the equivalent of extreme high tension voltage."

"Right," Price said crisply, turned aside, and put the sheet carefully away.

"That leaves little more here," Yuk commented, and tugged out his own ray-gun. Before the surgeons had the

least chance to move away the ray had swept the length of the line. They fell like so many ninepins, killed instantly.

Price gazed blankly. "But — but, Yuk, you promised them—"

"I made a promise I had no intention of keeping," Yuk answered implacably. "These Ukians have no honor, no soul. They give a formula that means the destruction of their fellow spies on Earth without a qualm, purely to save their own skins. So — extermination is the best policy. A Krajian never makes conditions. All or nothing!"

PRICE shrugged.

."The law of Kraj is ruthlessly efficient, anyhow," he remarked. "Perhaps you'll give me a hand to attend to these other unfortunate ones?"

"Willingly. You will require machines to return to Earth. You have my permission to use my space ships for the time being; we will be staying here for a while."

An hour later Price was heading a dozen ships back from the infinitely small to his own beloved Earth. Beside him sat Irene. She dwelt but little on the horrors she had undergone, only upon the peace and security that lay in the future.

And peace and security it proved to be. The electrical system was duly put into operation at the earliest moment. For two days paralysis spread over the still war-mongering hordes of Earth, but when they awoke those strange and belligerent urges had gone. They were normal again, shaken human beings, but prepared to take up the threads of their war-shattered lives once more.

So, ultimately, the balance was restored. The wreckage was cleared away; rebuilding took place; journeyings between Micropolis and Uk became even more frequent now that the beaten planet was annexed by the Krajians. In five years it was hard to tell that there had ever been an invasion from the microcosm; indeed only a few seemed to remember it. But Raymond Price, the new chief of Interatomic Corporation, and his lovely young wife, never forgot it.

●

IN THE NEXT ISSUE

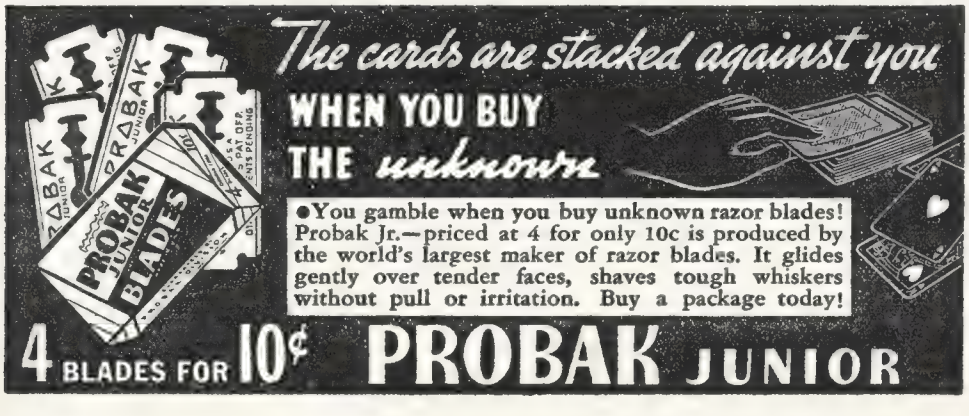
●

A Baffling Alien Form of Life Is Discovered in

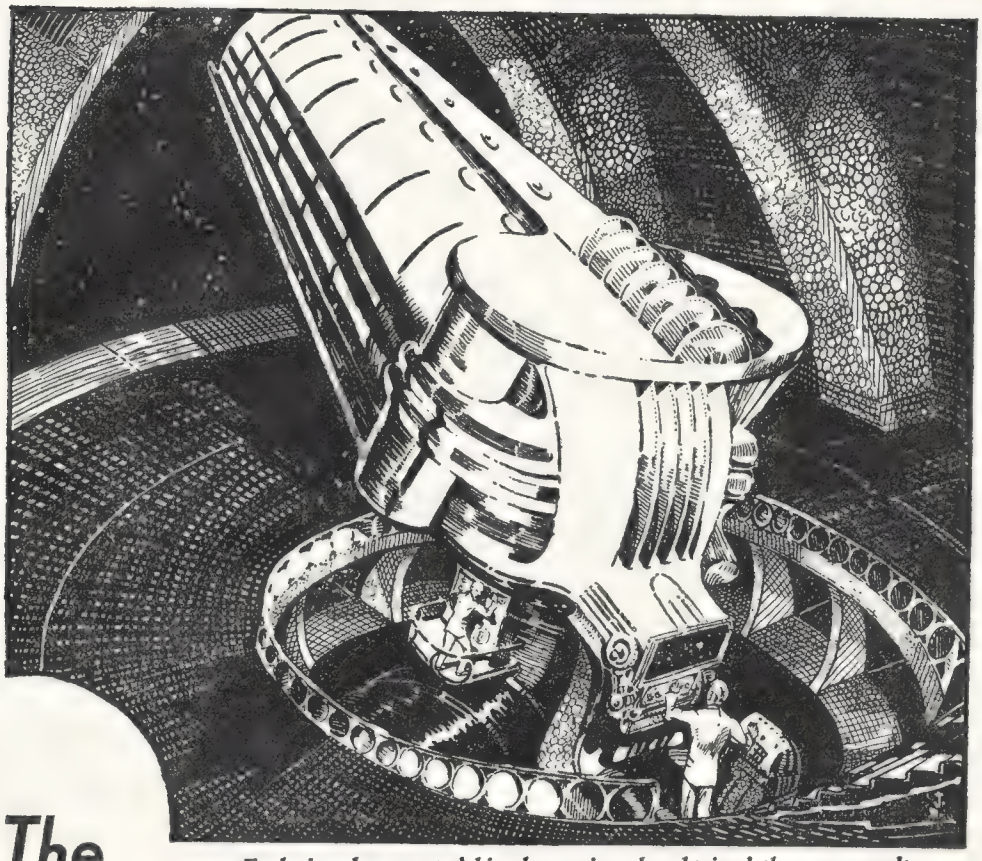
THE DOUBLE MINDS

A Novelette of Science Secrets

By JOHN W. CAMPBELL, JR.



He Was the World's Greatest Astronomer—Yet When He Warned Earth of the Impending Impact of a Giant Meteor, They Laughed at Him!



Each time he repeated his observations he obtained the same results.

The MOLTEN BULLET

By ANTHONY RUD

Author of "The Cain Brand," "The Griffin," etc.

THIS is the last of my long series of studies of the folk of the Lost Planet, fellow Skrygeours. Or, fellow Martians, as we have agreed to call ourselves, the name being so much more pleasing to the electric ear.

I feel a warmth and a sympathy for those Earthmen, so far ahead of us in many ways, yet totally unable to help themselves in that last dreadful calamity.

Since we have adopted their spoken and written word, in place of our thousands of clashing dialects different along each two canals, and so many of their incredible mechanisms, it is only natural that we should have devoted time to their individuals.

In passing let me say that my deepest regret has been the inability of myself and other Martian scientists, in spite of our monster selectoscope which

allowed me to pick up their ether waves, their speech, and even to follow the movements of any single Earthian with understanding, to get together with their great scientific men in any sort of talk.

We could hear and see and understand almost everything; but we could *not* fathom the manner in which those ether waves they called radio, were flung from place to place, and even out to us here in the center of the Universe.

They, on the other hand, were apparently several time cycles behind discovering anything similar to the Loamm selectoscope, which would have enabled them really to study *us!*

As I have reiterated, both physically and mentally they resembled us so closely—allowing for the differences in climate and our other natural advantages, of course—that it is almost certain we sprang from the same stock.

Either the Creator developed life on both planets in almost identical fashion, or at some past time and greater epoch of civilization we must have conquered the difficulties of interplanetary travel, and sent a space ship to colonize Earth.

I favor that theory. Though of course it *might* have been a landing party from Earth which started *us!*

I HAD great hopes for Albert Einstein Ammerton. He was more like a Martian than any of the other scores of Earthmen I had studied. If any man on Earth ever could have invented our selectoscope, or its equivalent, Ammerton would have been the man.

According to their time reckoning, which I have explained earlier, Ammerton was born in their year 1937, A.D. Though we might have regarded him notably backward, and odd in some respects, from his very earliest years he was far ahead of his fellow Earthians. He was a mathematical genius.

At the age of eleven he had graduated from Massachusetts Institute of Technology and already was in a fair way to becoming recognized as the greatest Earthian authority on mathematical variants. When he was fifteen, and acting as third assistant at the great Sandraes Observatory, he worked out a correction to the parallax of Neptune—an error which had gone undiscovered for more than a century.

Development of this kind, usual with us on Mars, was something more than phenomenal on Earth. Ammerton was called a prodigy. Like our great astronomer and calculator, Ebii Loamm, who had conquered the binomial theorem at the age of forty months, Ammerton was a trifle narrow in after life. He did not become insane, however, (You will recall that Loamm, after inventing the selectoscope, went violently mad at the age of two hundred, in the very prime of his young Martian manhood.)

Ammerton's greatest interest lay in the far stretches of the Universe. He was human enough, in his odd moments though, to court and marry a beautiful young woman, one Elspeth Sandraes, daughter of the multi-millionaire Earthman who had given this observatory its great 300-inch mirror telescope.

So no one was greatly surprised when in 1963, at the death of the observatory chief, Albert E. Ammerton was promoted over the head of the then assistant chief, one Hans Becker, and given supreme authority in the Sandraes Observatory.

Note that name, Hans Becker. He was much like many Martians you and I know—selfish devils, consumed by inner furies, men who believe that all that they desire should be handed to them, irrespective of their real desserts.

With the selectoscope I followed Becker and Ammerton, and flatter myself I understood them from bones to brains. It is too bad they were not radio engineers, for if so it is certain we would know now the one great Earthian secret which escaped us.

(Even now, after one of our Martian centuries—equal to 178 Earth years—I often puzzle over what those early radio broadcasters were trying to tell us, when they kept repeating over and over again that statement about the music going round and around. It did, and so did their words, of course, but as far as giving us the hint we sought, it seemed irrelevant!)

Hans Becker was about forty years of age, haughty and arrogant of manner. He was a competent astronomer, of course, painstaking and methodical, until a pair of things happened to upset him greatly.

FIRST, the beautiful heiress, Elspeth Sandraes, married Becker's young rival, Ammerton. Second, Ammerton received the coveted post as head of the observatory. As the chief assistant, Becker believed that he should have received the appointment. And it is probable that he did love the girl. A good many men of assorted ages did.

How Becker did rage! I was fascinated by him, and followed him on the long walks he took over the countryside. He walked fast in spurts, sometimes raising his right leg stiffly in a sort of wooden-soldier march, sometimes stopping short to lift his fists to the uncompromising stars, and shout curses which ought to have turned green the face of the moon.

Becker's own white face would grow red, then purple, while his thinning thatch of yellow hair bristled with the electricity generated by his venom.

All that first year Ammerton, happy with his new wife and the great camera-telescope, was unaware of the hatred and jealousy seething in Becker's heart. In fact Ammerton was extremely blind, never finding out about this personal grudge until at last it was almost too late to do anything about it.

In all their relations at the observatory, Becker was courteous, suave and obedient to his new chief, bending often from the waist in that stiff, rather jerky bow which was characteristic of him. But his inner thoughts must have been black and slimy enough. He vowed aloud in a shout to the distant stars—and to my selectoscope—that he would devote the remainder of his life to vengeance.

It was Ammerton's career as Earth's foremost astronomer, which Hans Becker ruined—and ruined so insidiously, after a long period of seeming harmony with his chief, that the plotter achieved his object in full before Ammerton as much as suspected that he was the victim of a conspiracy.

Becker came of a German family of clockmakers, and himself had served an early apprenticeship in that trade. So he was deft with delicate machinery, intricate little affairs of springs, pawls and ratchets. He studied the finer adjustment mechanisms of the awesome camera-telescope, and then busied himself for weeks in a secret workshop in the cellar of his home.

Then during one afternoon, when honest astronomers s l e e p, Becker brought his devilish little gadget to the observatory and fitted it to the great telescope. It concerned tiny fractions of a degree in setting, and was so small itself and placed so well out of the way that no one could suspect its presence, save possibly the subordinate in charge of cleaning, oiling and care of the expensive instrument. And that subordinate was Hans Becker himself!

A tiny electric switch in the adjoining office had to be thrown, in order to affect the telescope. When the switch was not in contact, the instrument was perfect as usual. But Becker, by merely moving that switch arm back and forth, could make one observation faulty, while another taken the next minute, would be accurate!

The error there on Earth was perhaps three one-hundred-thousandths of an inch. Two and one-half billion miles away on Neptune, for instance—a planet much nearer than any star—that tiny discrepancy had magnified itself so greatly that an astronomer could break his heart endeavoring to understand it.

OR, he could believe that stars and planets suddenly and irresponsibly had left their prescribed orbits, like so many off-center-weighted golf balls in flight, and were slicing and hooking themselves into the heavenly rough.

Becker was far too wise in his plotting to allow anything like this, uncontrolled and incredible, to happen. What did seem to occur was calmly regulated and consistent, even though startling. You see, astronomy was so exact a science that when even a tiny error showed its head, it created a sensation throughout the world. It is quite as if in a high school geometry

class a young sophomore went to the blackboard and demonstrated to the astounded teacher that in a certain right-angle triangle he had discovered, the sum of the squares of the two other sides did *not* equal the square of the hypothenuse!

Becker waited until his chief launched a series of observations. These had to do with the earth's present orbit, and inferentially with the eccentricity of that orbit from one million years B.C. until the present day. Ammerton little realized that he was going to find anything more wrong than might be accounted for by the difference in modern and old-time instruments. Croll, Leverrier and Stone, working out these calculations first, had been handicapped by telescopes outdated by more than a century.

But Ammerton's results certainly did begin to come out differently! At first he was inclined to doubt, to think that possibly the great instrument itself must be in error. But tireless checks over all the great coordinates of the heavens, finally convinced him that he was on the right track, and that those old figures, believed in the way lamas believe in Buddha, were in gross error!

Becker stayed right with his chief all night long every night for months, helping take the photos, tabulating results, and making intricate calculations.

When not in the observatory, Ammerton was walking around wide-eyed and preoccupied. His wife scarcely knew him. He muttered long strings of figures to himself. The thing he had come upon was stupendous, unbelievable!

Yet everything checked. Each time he repeated his observations he obtained the same amazing results. Of course it *had* been difficult indeed for those poor fellows with their primitive apparatus, back in the nineteenth century. But even so, it was hard to conceive that they had been this far wrong.

At last Ammerton's final doubts were satisfied, though. He sat down to write the epoch-making article for the *Journal of Astronomy,* which would give these new results to a wondering world.

Heretical statements such as this were the meat of the new exposition, which would make savants gasp:

> It must not be supposed that the eccentricity, in obedience to the laws relating to planetary eccentricities, oscillates between the absolute maximum and the absolute minimum, the perihelion shifting continuously forward. On the contrary, the successive maxima and minima are very unequal, and are attained after very unequal intervals.

Becker looked startled and shocked when he read. He stammered around, and then suggested fearfully that it might be wiser to break the news somewhat more gently. Would not *Herr* Ammerton consider sending out a few hints first, and postpone the actual publication of his revolutionary article until some future time?

THIS got the scientist's back up—as it was intended to do.

"By the cosine of Caraneus, *no!*" cried Ammerton, banging his clenched fist on the table in passionate emphasis. "I'll never quibble or qualify! When I'm right, I'm *right*—and everyone must know and understand!"

"Of course you know best, chief," murmured the hypocritical Becker, bowing stiffly from the hips. "And what a poke in the eye is coming to you, you handsome sap!" he gritted under his breath, concealing jubilance under the usual mask of grave suavity.

It was during those days, following the mailing of his treacherously deluded article, that my fullest Martian sympathy went out to poor Ammerton. Not only had he been betrayed in his lifework, but all the natural and unnatural misfortunes men are heir to, started ganging up on him. He fell ill with influenza. His wife died in childbirth, and the baby with her. And then when at long last Ammerton managed to stagger to his feet, facing every disaster like a strong man should, resolved to bury his sorrows in work, he found even that chance for forgetfulness slipping away from him!

The friendly editor of the *Journal of Astronomy* had sent him a message, hinting that after having read the cosmic surprise in the long article, he wondered if Ammerton were not poking out his neck a bit too rashly. He suggested

a careful recheck of results.

Ammerton, out of himself with grief and physical illness at the time, answered this with curt savagery, quite unlike his usual manner. So in due course the article appeared. The magazine editor realized it would boom circulation, even though it did ruin Ammerton. And then, of course, there was the slight possibility that the man was right. He had a worldwide reputation for care and thoroughness in his work.

The sensation was all that anyone expected. Then for a few weeks—silence. Finally, when other observers had gone over the ground, there came the frigid, stern word that Ammerton must be quite mad. This came from Professor Emmanuel Liebling, of Prague.

An Associated Press interview with another noted astronomer, Dr. Wilfred Graham of Lick Observatory, appeared in many of the chief newspapers. Dr. Graham said flatly that his learned contemporary was mistaken.

Less dignified savants all over the earth jeered loudly. Why, any eighteen-year-old freshman in college astronomy could take a twenty-foot 'scope and show how ridiculous these findings were!

The Judas plot of Hans Becker had worked to perfection.

Now he added the master touch. Spurred out of his grief, indignant beyond words, Ammerton plunged into a complete recheck of his work. And his second batch of results was identical with the first, to a dozen decimal places!

He called in Becker to see. But now, appalling though it was, results were totally different! (Becker, of course, had thrown off the switch.)

Sweating even in that chill mountain observatory, shaking with a palsy of sudden horror, Ammerton suddenly broke. He yelled insanely, flung his fists aloft, and ran from the observatory gibbering in momentary madness.

If Hans Becker right then and there had dismantled his secret apparatus-of-error, he would never have been discovered. Like many another criminal, however, he could not keep from overdoing it. He saw that his chief's great brain was practically unhinged now. One more shock, one more senseless happening which reason could not explain, and the mental ruin of the young scientist would be complete. That, and nothing less, was Becker's goal.

BACK now into the observatory rushed the wild-appearing Ammerton. One can realize just how far from his usual mental moorings he had drifted, by what he did then. He actually cleaned the lenses of a ponderous eyepiece, unused since the first days of testing the giant camera-telescope, *and looked through this eyepiece into the heavens!*

Becker waited. The opportunity for his final coup would arrive, he thought, but this was not it.

Ammerton was sweeping the night sky, his own mind chaotic. He chanced to cross the orbit of Polyphemus. This gigantic asteroid-comet, which for many centuries had come near—dangerously near—the Solar System, once each eighty-three years, now was out of sight from any save the very largest modern telescopes on Earth. It may have been causing the jitters just then, to the ice-blooded inhabitants of far-away Uranus, if any.

Ammerton's keen observer's brain, still not addled as were his emotions, caught and fastened to a strange thing. There was something peculiar and disturbing about the asteroid-comet, showing out there against the blue-black of interstellar space as a faint streak of orange fire.

Polyphemus had a kink in his tail!

In plain words, his tail should have been slightly curved, if he were pursuing his ordinary course. Instead, there was a wide bend in it! That meant trouble.

Ammerton instantly realized the possibilities. They were so monstrous that the thought acted like an ice-pack on his fevered head. The distortion of the tail meant that somehow and sometime the asteroid-comet had abruptly changed course!

As a possible result, he might hit and explode one of the planet members. Or another catastrophe, thought Ammerton with horror, might lose Earth

its sun—letting all inhabitants of that planet freeze to death in a few hours. Or it might even head Earth straight *into* the sun, to be swallowed up in boiling, molten oblivion!

There were other terrible possibilities as we on Mars know; but those were enough for Ammerton at that time. He started new observations, making photos of Polyphemus every half hour, and calculations from them.

During the following day, unable to sleep, the scientist studied all available data on Polyphemus. He made painstaking calculations, and at ten that evening carefully swung the giant telescope to a certain position of right ascension. Careening along through space at its terrific pace, the comet-asteroid should have reached this exact point at 10 P. M. sharp, Greenwich Observatory time. Again Ammerton looked through the eyepiece of the telescope before getting ready to take the photograph.

An awed exclamation burst from his throat. Polyphemus was not there!

(I hasten to make plain that this was *not* Becker's fault. That scoundrel was lying low and waiting for a good opportunity, which he did not suspect had arrived. Ammerton had told him nothing of the blood-chilling discovery.)

With the big telescope sweeping back to the comet-asteroid's position of the previous night preliminary to some sleuthing of the star spaces, Ammerton was shocked to discover Polyphemus almost exactly where it had been the night before!

Realize what that meant! The tail had grown appreciably shorter. Polyphemus had changed direction sharply, and now was headed *directly toward Earth*, at an approximate speed of 3300 miles a minute!

OF course, whatever it was that had shooed it from its normal orbit, might have slowed it somewhat, or vastly increased this usual speed. Time alone could tell. But Ammerton was never to know, nor anyone else on Earth, why Polyphemus had changed its course so amazingly. No one could suspect that it was because the asteroid-comet was a mass of highly magnetic iron, attracted to Earth's iron core!

However, unless something intervened, or the speed of Earth was sufficient to outstrip Polyphemus, this unholy game of celestial tag was bound to end in blazing catastrophe!

The mass of Polyphemus, which was indeed a super-comet, was approximately seven times greater than that of Earth's moon—or about one-twelfth the mass of Earth itself! When and if these two bodies collided, it would create such intense heat that both would be utterly consumed, and the resultant gases blown away into furthest space!

Naturally there could be no survivors on Earth, unless some of them came forward with a space ship at the last minute, and succeeded in navigating away to some other planet. If that happened, of course, the refugees would have been most welcome among us on Mars.

Chances, however, of any group of Earthmen inventing and actually building such a ship in the short space of a few weeks—the time which would intervene before a collision—were naturally very small.

However, on the fourth morning, after three nights of intensive study, Albert Einstein Ammerton announced to the reporters of a large daily newspaper that Polyphemus had gone wild, left its recognized orbit, and now was running amok to collide with Earth!

The scientist, though knowing now well enough what would be said of him in astronomical circles, thought it his sacred duty to warn the world. He himself had ceased to matter.

The reporters spread themselves, and their city editor cooperated. Ammerton's story was rendered with all due solemnity—if you were not capable of reading between the lines. It was a derisive masterpiece. While seeming to kowtow as usual to the sage of Sandraes, it really said in substance, This Guy Is A Nut, And Here Is Proof!

Other astronomers, boiling over with indignation at Ammerton's previous mistake, did not even wait until their

smaller telescopes could pick up Polyphemus. They howled. They jeered. They demanded that alienists be called to consider Ammerton's case, and that immediately Sandraes himself and the trustees of the observatory, get together and discharge the crazy man.

Through it all for nearly a week, a pale-faced man with set jaw, glued his eye to the telescope and watched the onrushing doom. He had every calculation made. He knew the day, hour and second when Polyphemus would reach the outer limits of Earth's atmosphere—and then the fractional second later which would be the time of actual impact. Gripped by gravity, the speed of Polyphemus would increase terrifically, along at the last. It would probably reach the awesome velocity of 5000 miles a second!

Earth had twenty-nine more days to live, according to Ammerton.

All of a sudden the derisive clacking of onyx upon porphyry, the braying of human asses, and the skirl of jeering bagpipes come to an end. A few of the learned doctors tired of their fun, and turned to peer through their own little lensed barrels. Might just as well see what might have caused poor Ammerton's delusion.

Then came a brief, appalling message out of Europe:

Dr. Luigi Genetti of the Cisalpine Observatory says Ammerton may be right! Polyphemus headed straight for Earth!

In Sydney they saw it. In Moscow. At Cape Town. At Buenos Aires. At Edmonton. In the course of five or six more days they all could make out Polyphemus. Give them another week, and they would be able to discern a small, glowing sun all by itself in a blank portion of the heavens, using only their naked eyes!

BY the time that week was out increasing crowds were gathering to stay up all night and stare at Polyphemus. There was an undercurrent of mild excitement. Fear? Not a bit! Too many bearded wiseacres clad in nightgowns had climbed to the tops of neighboring hills, and there waited for the end of the world. The great Earth public was enjoying a new kind of show, but it was not in the least disturbed. Not yet, that is—

The days and nights passed. Of course long ago the comet-asteroid had completely tucked in his fiery shirttail; or rather, because of the sun's position directly beyond Earth, it was streaming directly behind him, and therefore could not be seen from Earth. Dr. Graham of Lick Observatory now calculated that his speed had increased to 13,700 miles a minute!

It was when he read this frightened report that Hans Becker realized the truth. A few hasty observations of his own convinced him that destruction of the earth, with everything upon it, loomed. And Becker, like many another treacherous scoundrel and egomaniac, feared hurt and death to himself with an intensity of wild, shuddering horror. It could not be! It *could* not! It—

He had to catch a grip on himself, for just then a surging horde of reporters came rushing to him, demanding his views on the all-important thing. Did Earth have any chance to escape?

Controlling his shivering, Becker pooh-poohed the idea of world destruction. Certainly Polyphemus was coming. But after all, what was the usual fate of a meteor (he knew, of course, *this* was no meteor!) which rushed into the rim of Earth's atmosphere?

In practically all cases, the friction set up caused it to be consumed utterly! In this case it just might be that a fragment would succeed in reaching Earth's surface; enough, let us say, to cause a perceptible jar. Or perhaps it would go unnoted, like that big meteor which fell in Arizona a few thousand years ago.

But Hans Becker, try as he did, could not believe his own words of assurance. For untold centuries the comet-asteroid Polyphemus had been a flaming bulk of molten metal and gases, careening through space. Why should it be consumed in the few seconds—or split part of a second—it would take to traverse the atmosphere of the earth?

Answer: it *wouldn't*!

In his palsied fright, Becker forgot all about the throw-switch on his desk,

and its effect upon the big telescope. What a little matter this thing, and Ammerton's disgrace, seemed now! Ransacking his desk, gathering items he meant to take with him to a deep cellar or vault somewhere, Becker accidentally upset one of his desk telephones, and did not bother to put it back on its cradle.

The speaker-transmitter b u m p e d against the throw-switch, and closed the circuit. Becker went in haste, not knowing and not caring.

Ammerton came into the observatory a half hour later, and went to the telescope. No longer was it possible to get anything save boiling, seething chaos by training the big instrument upon Polyphemus; but the astronomer had some by-product observations and calculations he wished to make. When, however, he attempted to train the telescope, he found it cock-eyed!

From that to a discovery of Becker's apparatus and the subordinate's treachery, was a short matter. Ammerton traced the wires to the switch on the desk, and found out exactly how the thing had been worked to make him go haywire on those first calculations published before the scorn and derision of the entire scientific world.

SO—he had been wrong after all—and it had been his trusted helper who had betrayed him! From that moment Ammerton, deprived of everything he had loved and valued in the world of men and women, forgot the impending cataclysm, except insofar as it limited his time now to a few days. Before that space of life was ended, he meant to find Becker, who had gone from the observatory, and even from the secluded hamlet at the foot of the mountain. Becker had taken the train for New York City. Ammerton did the same. He was out to wreak vengeance upon the scheming rat.

Then those last four days of fiery terror. That is, from dawn to dusk the sky was practically as usual, save for a gathering heat haze. Polyphemus came always in the direction of the night side of the earth, as far as North America was concerned.

At night, however—if you could call it night—a full third of the sky was filled by the glowing, rushing monster! It gave far more light than ten suns. And perhaps the most horrible part of it all was that, employing plain smoked glasses, any inhabitant of the world could watch Polyphemus actually roiling and boiling and *growing in size!*

With a loaded pistol in his pocket, Ammerton was on the trail of his quarry. Haste was important now; and in these days of mounting horror, few people paid attention to others. Each man was searching his own soul for hope, and most were finding only the rusted tin cans, worn-out auto tires, and empty bottles of past excesses. Ammerton managed, as time grew terribly short, to learn that Becker for some reason had left New York City, (it was his fear of the falling skyscrapers) and had gone out to a place called Port Washington on the shore of Long Island.

But even finding one man in that large a place, was a hard task. Ammerton started a systematic search, since it appeared that Becker was unknown to the crowds running panic-stricken about the streets. No one could give any information, or cared to try. Most thinking men had provisioned deep cellars, hoping against hope that disintegration of the comet-asteroid would occur, and that somehow Earth would survive—with perhaps only a few days of excessive heat.

Becker certainly had sought one of these holes. Ammerton grimly made the rounds, hoping he could be in time.

Mounting terror reached its icy, constricting fingers to clutch the hearts and brains of all careless mankind. Business stopped. Ships put into port and were immediately deserted. Trains, city subways, airplanes — everything quit. Power was turned off. Gas plants ceased operations, and storage tanks of gasoline, oil and other inflammables, were emptied.

Frenzied throngs rushed about the streets of cities, like ants caught upon a hot plate. The arrogant New York multi-millionaire, Augustus Blick, who manufactured motor cars, was caught, crushed and trampled to death by the maddened mob besieging the largest

cathedral in New York, attempting to get inside and repent their sins.

In all the world only a few real saints and Ammerton went about uncaring. And Ammerton really did care, not for catastrophe, but for completing one private affair before it came. Even Polyphemus paled before the star of his destiny. If he found Becker now, what did it matter that the end of the world arrived ten minutes later?

THAT final night the entire heaven was sealed from horizon to horizon by the glaring, molten bulk of the monster of doom. Heat outdoors became too intense for humans. The ground began to smoke. Pitchy trees in the forests suddenly burst into flames. Buildings of frame construction began to scorch and blister. Everywhere men took their families into cellars and holes in the ground, into mines.

Then by word of mouth the dreadful last-minute news was passed: Two more hours, and Polyphemus hits the outer rim of the Earth's atmosphere! Then we will know!

Ammerton, making a final dash across the street of liquefied asphalt paving, realized that when he had searched this block of buildings, in which a bank was situated, he was through. Even with every protection, he could not venture outdoors in the remaining moments—if any did remain —without shriveling up and burning to a cinder.

"Just let me see him! Just let me see him once!" he repeated over and over in half imprecation, half prayer.

One hour, fifty-nine minutes and fifty-one seconds of the period of grace had sped, when Ammerton at last succeeded in bribing his way into the crowded subterranean bank vault. The place was jammed with sweating humanity, lighted only by a few candles, and filled with the fearful din of frenzied sinners on their knees.

Becker was there. He was on his knees, arms wildly waving.

But that moment he saw Ammerton pushing through the crowd, advancing, his face a mask of grim vengeance, to level an automatic pistol.

"Don't!" shrieked the Judas.

"You betrayed me, and made me the scorn of the world!" said Ammerton, calm and implacable now. "So, the world's vengeance—"

His words were lost in the sudden, screaming awfulness high above. The heat of the earth's surface, as its atmosphere was consumed like a flimsy curtain, suddenly mounted to millions of degrees! The bank building, like all other excrescences on Earth's surface, suddenly became molten over their heads. The surface too—even before the actual impact—

But just as he himself dissolved into a wisp of smoke and nothingness, Ammerton squeezed the trigger of his pistol. Flame spurted, meeting greater flame in mid-air.

The bullet never reached its mark, for the mark had gone. The vault, along with the planet Earth, melted, became gas, exploded — all in a trice. The cupro-nickel slug from the gun melted in flight and disappeared.

But Ammerton, dissolving into fires hotter even than the imagined hell of his forefathers, believed in dying that he had avenged the wrong.

MISSING!

● You're missing full shaving comfort if you're not using Star Blades! Made since 1880 by the inventors of the original safety razor, every Star Single-edge Blade has a keen, true, long-life edge 100% uniform. Star Blade Div., Bklyn., N.Y.

FOR GEM AND EVER-READY RAZORS

STAR Blades 4 FOR 10¢

LOST IN TIME

A Warp in Space-Time Catapults Jim Dunning into Another Age Four Centuries Hence!

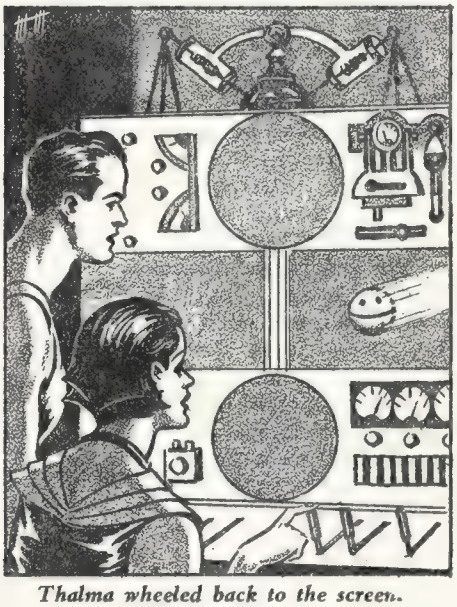
By ARTHUR LEO ZAGAT

Author of "The Lanson Screen," "The Land Where Time Stood Still," etc.

CHAPTER I

The Stratocar

JIM DUNNING gasped in the surge of terrific heat. A vast roaring deafened him. He leaped to the lashed wheel of the *Ulysses*. In a single motion he loosed



Thalma wheeled back to the screen.

the fastenings and threw all the power of his knotted muscles into a desperate twirling of the polished spokes. The deck slanted. The yawl shot about in a foaming half circle and fled like some live, terrified thing from the whirling, topless column of fire that had leaped out of the sea.

Dunning stared, over his shoulder, across the lurid waters that a moment before had been a glassy plain, silvery under the moon of a windless Pacific night. The crimson pillar soared stupendously, the speed of its whirling whipping the ocean into long, blurred spirals of fire.

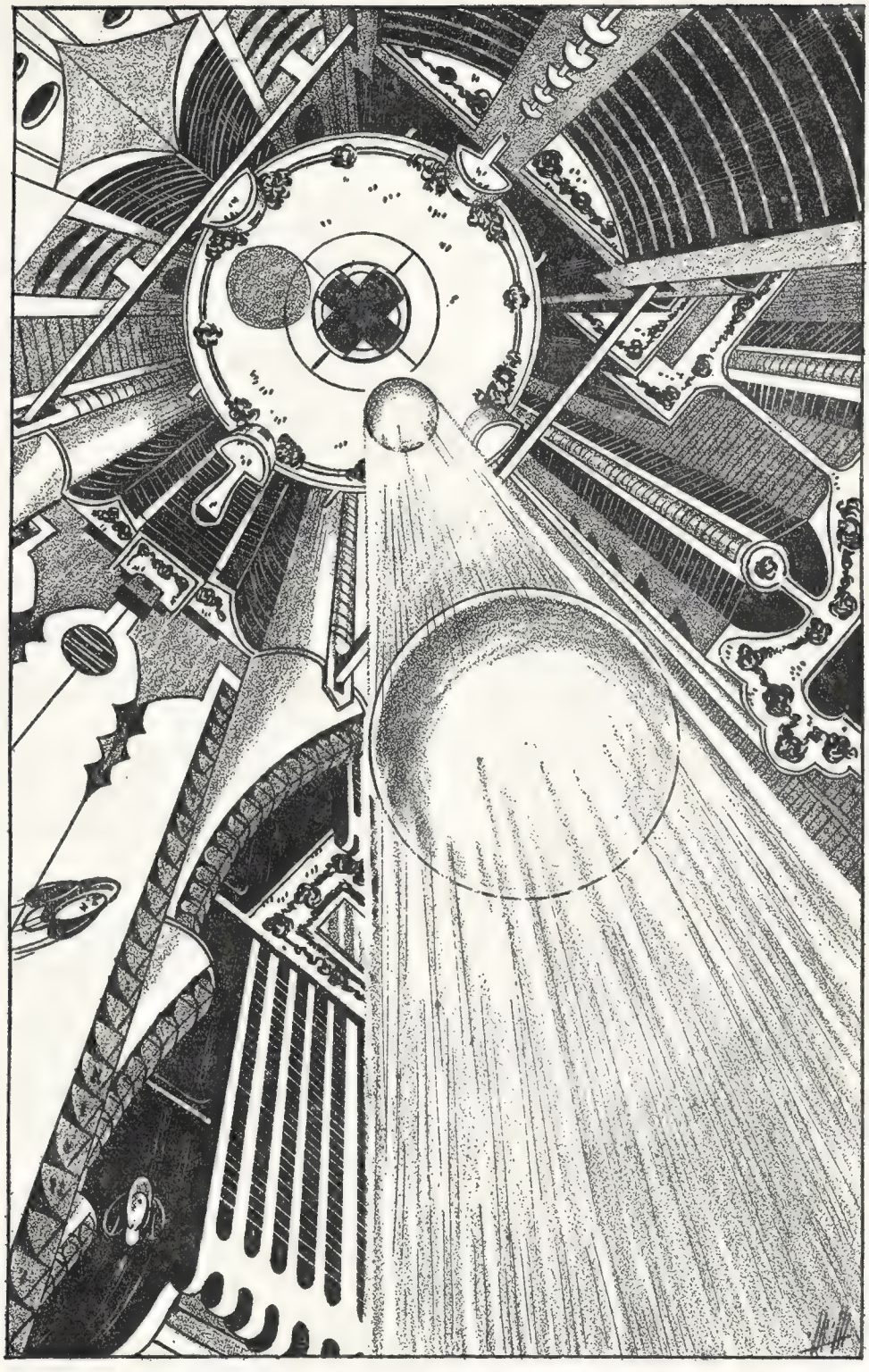
The tremendous blare of sound leaped suddenly higher in pitch, became a shriek. Something sprang into view at the base of the fiery column, something huge and black and round. On the moment the sea heaved and climbed heavenward till the flame was lashing from within a huge liquid crater. The dark wall of water expanded. A towering wave rushed toward Dunning with incredible speed.

Dunning crouched over the wheel as if to add the naked force of his will to the frantic *putt-putt* of the *Ulysses'* motor. The little vessel darted away like a thoroughbred under the lash. But the towering wave caught up with her, loomed appallingly above her. A briny avalanche crashed down on the doomed craft.

Jim Dunning fought for his life in a seething welter of waters. A hatch-cover, torn from its hinges, thudded against him. With a last, instinctive effort he hauled himself across the cleated plank, clung to it desperately as consciousness left him.

A reckless bet with some of his club members had sent Jim Dunning out

A Novelette of Dimensional Secrets



Faster, faster the two spheres cleaved the air.

from 'Frisco, six weeks before, on his disasterous attempt to cross the Pacific, single-handed, in a thirty-foot, auxiliary-engined yawl. And now in the greying dawn, his still shape floated on the tiny raft amidst a mass of wreckage. About him the vast circle of the horizon enclosed a waste of heaving waters, vacant of any life. Only a light breeze ruffled the sea's surface, calm again after the sudden disturbance of the night.

Eventually his eyes opened. Hopelessly, he raised his head. A curious object that looked like a large spherical buoy, floating half submerged, met his gaze. But what was a buoy doing here, a thousand miles from the nearest land, in water a half mile deep?

Dunning kicked off his shoes and swam strongly through the cool brine. The great ball hung above him as he floated, its exterior glass-smooth. He swam slowly around it, searching for some projection that would enable him to get to its summit. Inches above the water a threadlike crack showed. It made a rectangle three feet wide by five. Was it an entrance to the interior of the ball whose floating showed it to be hollow? There was no handle, no means of opening it.

Dunning trod water and with the flat of his hand he pushed against the unyielding sector, inward, then sideward, with no result. In sudden exasperation he drove his fist against the polished surface and yelled: "Open, damn you, open up and let a fellow in!"

AMAZINGLY, the metal moved! Dunning stared as the curved panel jogged inward for an inch, then slid smoothly aside.

"It's like the Arabian Nights," he muttered. "I yelled 'open sesame' and it opened." A prickle along his spine did deference to the uncanny happening. Then, oddly enough, he chuckled.

"That's it! An electric robot. Nothing to be scared of."

Only a week before Dunning's departure Tom Barton had demonstrated to him this latest ingenuity of the electrical wizards. It was installed in Barton's garage, a phon-electric cell so adjusted that at the coded honking of a horn it would set a motor in motion to open the doors. Barton had picked up the idea at the airport, where the same device turned on the floodlights in response to a siren signal from an approaching airplane.

"If honking horns and howling sirens can open doors, why not the human voice? Well, let's take a look at the Forty Thieves."

Gripping the opening's lower edge Dunning leaped out of the water and through the aperture. He was in a confined chamber, its walls and ceiling the vaulted curve of the sphere itself.

Sprawled across the flat floor was a girl, unmoving. Dunning caught his breath at the white beauty framed by long black hair that cascaded along her slim length.

"No!" he groaned. She can't be dead!"

Dunning bent over the girl and lifted one limp hand, feeling for a pulse. There was a slow throb. A long whistle of relief escaped him. She was breathing, shallowly but steadily, and her dark lashes quivered a bit where they lay softly against the curve of her pale cheeks.

There was a couch just beyond the girl. He lifted her to it, laid her down. Gently he straightened her robe of some unfamiliar, shimmering material —and whirled to some inimical presence glimpsed from the corner of his eye.

He crouched, his spine tingling with ancestral fear, his brawny arms half curved, his great fists clenched. But the man did not stir. Seated at a desk-like object just beyond the opening, he stared straight before him. It was his uncanny rigidity, the fish-white pallor of his face, that were so menacing. He was dead.

Dunning moved cautiously across the floor toward the seated corpse. It toppled as he reached it, thumped soggily to the floor.

The acrid odor of burned flesh stung Dunning's nostrils. There was a huge cavity in the cadaver's chest, its gaping surface blackened and charred by some searing flame!

Dunning swung his back to the wall, and his glance darted about the room.

The dead man and the unconscious girl were the only other occupants of the hemisphere. Had someone killed the man, struck the girl down, and escaped? But how had he managed it? There was no room for an attacker between the body and the contrivance before which it had been seated.

That strange object was of some unfamiliar, iridescent metal. It had somewhat the size and contour of an old-fashioned roll-top desk, minus the side wings. Across the center of the erect portion, where the pigeon-holes should be, stretched a long panel of what appeared to be milky-white glass, divided into two portions by a vertical metal strip. Above and below, tangent to the edge of the long panel at the ends of the metal strip, were two round plates of the same clouded glass. In spaces to left and right of these disks were arrayed a number of dial-faces; gauges or indicators of some kind.

On a waist-high, flat ledge were little colored levers, projecting through slitted grooves. From the forward edge of this a metal flap dipped down some four inches. Through this metal flap a hole gaped, its curled edges melted smooth by a flame, by the flame that had killed the man at his feet!

SOMETHING hard thrust into his back.

"Don't move! Twitch a muscle and you die!"

Dunning froze rigid at the crisp command. That voice from behind, vibrant with threat, was yet unmistakably feminine.

Dunning obeyed. A vague strangeness in the words bothered him. They were oddly accented. The low-timbred, contralto voice was speaking English, but an English queerly changed, glorified in sound, lambent with indefinable majesty.

A hand passed over his body.

"You seem to be unarmed now—turn around, slowly."

The girl was standing a yard away, pointing a black tube steadily at him. Her lips were scarlet against the dead white of her skin. Her eyes were dilated. Rage — and fear — stared forth from their grey depths.

"What have you done to Ran? Why have you killed him?"

"Nothing. I—"

"You lie!" she blazed at him. "You lie! You're one of Marnota's helots—sent to murder me! But how did he dare—open assassination? There is still law in the land—in spite of him."

"I don't know what you're talking about, sister," Dunning drawled. "My yawl was wrecked last night. When I came to, I saw your—this thing, whatever it is, and swam to it. The hatchway opened, you were on the floor, dead to the world. I lifted you to the couch, looked around, and found—this. I know less than you do how Ran was killed."

A flicker of doubt crossed the girl's face. There was an almost imperceptible relaxation of her tenseness.

"Your voice is so strange, you speak so queerly. Where do you come from? What are you?"

"I am an American."

Suspicion flared again, and hate. Dunning waited what seemed ages for a flash from the cylinder of death.

"But—somehow—you don't seem a murderer," she said. "You have not the brutish appearance of Marnota's mercenaries. There is something strange here, something I don't understand." The tube wavered, dropped a bit.

Dunning saw his chance. His hand flicked out, closed on the uncanny weapon; wrenched it away. The girl gasped. She was white, congealed flame.

"Go ahead," she whispered defiantly. "Finish your task. Press the button and kill me."

"I haven't any desire to kill you, or to harm you," Dunning chuckled. "I only want to know what this is all about. I'm Jim Dunning. What's your name?"

"I am Thalma, Thalma of the house of Adams," she proclaimed proudly.

"Sorry, Miss Adams. The name means nothing to me."

Amazement showed in her mobile features.

"You do not know me!" she exclaimed, wonderingly. "And you say you are an American?"

"I left San Francisco six weeks ago. Have you become famous since then?"

She shook her head, still bewildered. Dunning continued.

"Up to then I'm sure I knew what was going on. I read the papers. New York had just won the World Series. Franklin Roosevelt was President of the United States—"

A startled exclamation came from Thalma. Her weapon dropped from a hand flung up as if to ward off a blow.

"Roosevelt — President! Why — that's ancient history. What year was that?"

"What year? This year, of course, 1937."

"Nineteen-thirty-seven! What are you talking about? This is 2312 A. D."

CHAPTER II

No Way Back

JIM DUNNING was staggered. Twenty-three, twelve! She was cra— No, she wasn't. There was no madness in her wide eyes, only dawning comprehension — and fathomless terror.

"Marnota!" Thalma said fiercely. "What has he done to me?"

"What—" Dunning forced past the constriction in his own throat. "What do you mean?"

"He — Marnota — somehow he's thrown me back in time. Four hundred years back in time!"

The statement thudded against his ears, and, incredible as it was, he knew it for truth. There was something about the girl, about this queer sphere and its contents, about the very clothing of the girl and her murdered companion, that convinced him, against all reason.

"What shall I do?" Thalma's whimper was the frightened cry of a small child, alone with the dark and with blind, overwhelming fear.

Dunning took two steps to her side. His arm went around her shoulder, protectingly.

"You just trust your Uncle Jim! Everything's going to be all right, sure as God made little apples. Just sit down over here, and powder your nose, or whatever they do in your time. Then you can tell me all about it." They moved toward the couch.

But they never reached it. The globe lurched and sent them reeling dizzily to the wall. They were buried beneath a crushing weight of bitter water. They were caught in a storm. The floor careened again, and they were sliding toward the open hatchway through which the invading wave soughed out. Mountainous waves were piled high against a slanting, jagged horizon. Dunning's feet struck the sill. Braced against it, he saw the girl's white form plunge past him. He snatched at her, just managed to clutch her foot and wrest her from the grip of the out-swirling wave.

Just above him was the door-slide. He surged to his feet and thrust the panel home.

The sphere's interior was aglow with a soft light that came from everywhere and nowhere. The imprisoned remnant of the wave rushed crazily across the lurching floor. Dunning steadied himself against the wall.

From somewhere above him he heard the girl's voice, shrill through the clamor of the storm:

"Wait! I'll get us out of this in an instant."

He looked up. Thalma was pulling herself along the wall, up the steep slope. The floor's slant reversed itself, and she was flung against the desklike object where Ran had met his death. She caught at it, swung around to its front, was leaning over the panel through which a hole had been melted as if by a flame. One arm reached forward to the levers.

"Stop!" Dunning bellowed from a suddenly dry throat. "Don't touch that thing!" He hurled himself through space, threw the girl headlong from the board. "You fool! You little fool!"

She beat at him with her puny fists as the sphere lurched again, and whirled dizzily.

"What are you doing? We must get up and out of this storm! The stratocar will be wrecked!"

Dunning thrust her away, threw himself to the floor, rolled on his back,

jerked his head and shoulders within the space beneath the level desk that held the colored handles. He reached in and wrenched at something, then slid out again.

"Look at this!" he growled.

He held up a black cylinder to Thalma. It was the counterpart of that with which she had threatened him except that the trigger-button was missing, and that two fine wires dangled from the place where it had been. He struggled to his feet.

"That," he said grimly, "is what did for your friend Ran."

THALMA paled.

"And would have blasted me had I touched the levers! You have saved my life. How did you know it was there?"

"Had to be. The shot that finished him must have come through that hole in the panel. I had just figured that out when you jumped me. When I looked, just now, I could see these wires didn't belong there, that they were spliced crudely. And this was exactly like your weapon."

For a moment the tempest had lulled, but now it gripped the ball again. The orb whirled, tossed insanely.

"You said something about getting us out of this." Dunning had to shout to make himself heard. "Better do it, now, if you can, or we're done for."

He braced Thalma against the board. She pushed a red-tipped lever. Dunning felt the floor thrust against his feet. The sphere steadied, and the silence was startling after the tumult. The girl returned the lever to its original position and pressed a button at the corner of the board. The milky-white panels on the upright cleared.

Dunning was gazing through what seemed like open windows at a vast panorama. In the lower disc, black clouds billowed. Mountains of vapor thrust up from the rolling mass, were illumined by the sun's brilliant rays. In the halves of the long, rectangular panel he looked far over the storm clouds, to where a green, untroubled sea rose and fell. In the left-hand section the sun itself rode dazzling in a clear sky, a sky whose deep blue was repeated in the upper disc. Against the whiteness of a cloud to the right Dunning saw a round black blotch that he realized with a shock was the shadow of the sphere in which he rode.

"Why," he exclaimed, "those screens show everything outside — all around, above and below!"

"Of course! How else could the stratocar be navigated?" Thalma seemed astonished at his surprise. "I forget. The visoscope was invented late in the twenty-second century. You couldn't know anything about it."

Dunning looked at the girl ruefully.

"I must seem like a child to you. It's hard to recall that you are four hundred years ahead of me. Do I understand rightly, that this 'stratocar' is some kind of flyer, like our airplanes?"

"Certainly! But it is far more efficient. It can navigate the stratosphere at speeds that to you would be unthinkable. It utilizes the terrestrial lines of force and stored solar energy. The power coils are all housed in the lower half of the ball. They are tremendously complex, but the navigation is very simple. Look here!"

Thalma turned to the control board.

"Move any of these levers away from you, and the stratocar responds. Return the handle to its original position and motion in the direction indicated stops. The red lever is to ascend, the green to descend. White is straight ahead."

Her slim fingers touched each small handle lightly as she talked.

"Black is to—" Suddenly her voice dropped, her brow wrinkled puzzledly as her hand fluttered to two levers that were uncolored. "I've never seen these before. I wonder what they're for. Could they be—" Before Dunning could stop her she had pushed one.

ACROSS the visoscope a flame shot, crimson, whirling. The stratocar's interior was a timeless, spaceless place, where there was no up, no down; no sound, no sight; nothing but a vast heatless glare through which the pinpoint that was his consciousness fell endlessly, rose endlessly, and endlessly was motionless. He had no body, almost no mind.

He was an atom at the center of a tiny vortex, he was vast, gigantic as the Universe itself. Then—was it after eternities or in the next instant?—he was himself again, and the stratocar was around him, and Thalma was there at his side! The two looked dazedly at each other. The girl reeled, would have fallen if he had not caught her.

"What on earth did you do that for?" he asked excitedly.

She didn't hear him.

"That," she said slowly, "that was how I felt before, and then everything went black, and the next thing I saw you at the control board, and Ran was lying dead on the floor. I remember now, he had just said something about dipping to the thousand foot level."

"There must have been two trick connections to the descending control; one to the ray-gun, the other to one of these two levers. That's how you were thrown back to 1937 the same moment Ran was killed. But that's neither here nor there. Do you realize what you've done? You've sent us chasing through time. God alone knows whether we've gone forward, or back, or to what age. We knew where, or rather when, we were before you did that. We might have figured out how to get you back. But now—" He threw his arms wide.

"Then — then we're lost in time!" Her eyes were big and round, her lips trembled. *"We're lost in time!"*

CHAPTER III

Murder Without a Clue

THE phrase echoed and re-echoed, beat its terrifying meaning into Jim Dunning's brain. "Lost in time!" The vast reaches of eternity seemed to stretch before him, eons upon eons through which he and the girl were doomed to flee, searching desparingly for a familiar world. In the visoscope nothing showed but a cloudless sky and a vast green sea that heaved oilily. Had the sphere and its human contents been thrown back to the very dawn of history? Or forward into the dim future of a dying world?

A choked sob broke in on Dunning's thoughts, and a little hand grasped his arm.

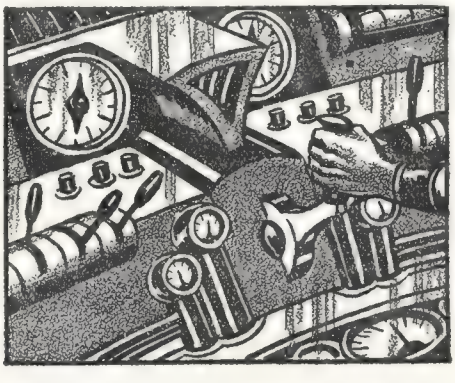
"What are we going to do now?"

"Look here, young lady, there's nothing to worry about," he mollified the tearful Thalma. "Why, we're making progress. We know how to navigate in time now. All we have to do is to find out what year we're in, and then—zip, presto—we'll have you back in 2312."

A voluntary smile responded to his buoyant tone.

"I never thought of that. There are two strange levers. If one sends us one way, the other will do the reverse. There must be some way of regulating the mechanism."

"Of course there is!" No use worrying her, but that was just the difficulty. How control the time-traveling mechanism while one was merely a bodiless consciousness? "First thing to do is find some land, some people, and locate ourselves in time. Do you know which of these levers to pull?"



Thalma seated herself at the control board. "Which way?"

"East. See America first!"

The girl glanced at a dial on which were the familiar compass markings, then deftly moved a lever. The sea began to glide smoothly toward the bottom of the lower view-disc.

Were it not for the evidence of the visoscope Dunning would not have realized that the stratocar was moving, so vibrationless was its progress. The girl was still pale, and her hands were quivering. He must get her mind off

their present plight.

"I wish you would tell me what all this is about. Things have been happening so quickly around here that there hasn't been any time to ask questions. For instance, who is this Marnota?"

"Marnota is America's greatest scientist, since my father's death. He is my uncle and my guardian. He and father, together, invented these stratocars and countless other things that have revolutionized civilization. Through their inventions they gained tremendous power. A quarter of the population of the United States is employed by Adams, Inc. Its factories, its transportation lines, its ports and its warehouses blanket the Americas. The prosperity, the very existence of the smallest village in the country depends on the company.

"Why do you think he would wish to harm you?"

"I know he would. Although my father and Marnota were brothers, they differed widely in everything but their scientific genius. My father envisaged his work as something that would make the world a paradise, reduce the hours of labor, increase everyone's opportunity for luxury and culture. He wished to donate everything to the government, to reserve a mere livelihood for himself. But all their inventions were owned jointly by the brothers and Marnota would not permit this to be done. Money is his god.

"While father lived simply, and devoted his great wealth to the people's welfare, Marnita built himself great palaces, filled them with sycophantic degenerates who pandered to his vices. He came to my father repeatedly with urgings to reduce wages, lengthen hours, increase prices. Adams, Inc. was all-powerful, he argued. The people might grumble, but would have to submit."

THALMA paused for a moment. "When I was just fifteen, after a particularly virulent argument in which my father made it clear once for all that he would never agree to Marnota's schemes, he was killed by an explosion in the laboratory. Strangely enough, Marnota, who had been working with him on some new problem, had been called away not fifteen minutes before the fatal accident. The laboratory was completely demolished. There was no way of telling just what had happened."

"Sounds suspicious, as you tell it. But, after all, Marnota was your father's brother. Do you really believe that he—"

"I'd believe any villainy of Marnota," the girl flared. "He is vile, I tell you, vile!" Thalma was somehow less lovely as hate darkened her clean-cut features. There was a long pause, while her unfocused eyes stared into vacancy. The stratocar swam steadily eastward. No hint of what age they were in showed in the visoscope.

The girl resumed her story.

"My father's will had been made shortly after my birth, before my uncle's real character had showed itself. Imagine my horror when it was revealed that Marnota was to be my guardian, trustee of my inheritance till I was twenty-one! A week before my twenty-first birthday he presented this stratocar to me. A much improved model, he said. It could be easily handled by one person and he wanted me to have the first one produced as a birthday gift.

"I was pleased, but not for the reason he thought. With this new flyer at my disposal I could disappear, hide myself somewhere until I came into my own. For I was uneasy, frightened. My death would mean so much to him. His power over Adams, Inc. would become absolute if I were removed. That night I stole out to the car, planning to flee alone. How well Marnota read me! But Ran, my faithful servant and friend, suspected my intention, and intercepted me. He insisted on going with me, and I yielded.

"We made for Hawaii. We were above the Pacific when I heard Ran say something about descending a bit. He moved the lever. There was a sudden, awful flare into nothingness—I felt myself thrown from the couch — and — well, you know the rest."

"That flame I saw, and the wave that wrecked the *Ulysses,* must have been

the visible result of the warping of space-time as the stratocar shot back for centuries! What a devil that uncle of yours must be, and how well he planned! A murder without a clue—the body hidden in another era. But see how the man's scheme had been upset by accidents he could not have foreseen! If you had been at the controls, instead of Ran; if you had been over land; if I hadn't happened to be at that point in all the miles of the Pacific; he would be in undisputed control of the company, with nothing to fear. As it is—"

"As it is, I can't see what difference all that makes." Thalma's tone was flat, hopeless. "I might as well be dead as wandering aimlessly—lost in time."

Once more that phrase struck a chill through Dunning. In the visoscope, low on the horizon ahead, a bluish haze appeared. The blueness deepened, solidified. A dark fleck appeared in the sky. It grew rapidly. It was a tiny ball—the sun caught it and it glinted coppery.

"Jim! Jim!" The girl's fingers dug into his arm, her voice was strident, hysterical. "It's a stratocar! A stratocar! Do you hear me? What does that mean?"

"It must mean that by some miracle we're back in your time."

"Oh, thank God! Thank God!"

"What's that blue band around the center of that flyer, and those black discs? There are nothing like those on this sphere."

Thalma wheeled back to the screen. An exclamation of dismay came from her.

"It's a patrol ship, one of Marnota's police craft!"

FROM one of the black spots that had caught Dunning's eye a white beam shot out. It caught the time-traveler. The scene in the visoscope dissolved into a dazzling radiance.

Thalma tugged frantically at the levers. There was no response.

"They've got us in the neutralizing beam. Our power is gone!"

A voice sounded in the chamber, coldly challenging.

"What craft is that?"

The girl faced a circular device, covered with a fine metallic mesh, that was inserted in the wall beside the control board. "This is Thalma of the House of Adams." Her steady tones showed nothing of the fear that stared from her eyes. "Shut off your beam and permit me to proceed."

The voice laughed, sneeringly.

"The message received by Marnota of the House of Adams purporting to announce her return on the eve of her majority has been found to be a forgery. My orders are to bring any claimants, should they appear, directly to Marnota for identification." Dunning and Thalma exchanged startled glances. The plotter had provided against failure of his plan.

"I demand to be taken before the Federal Court." Thalma was defiant. "Marnota may appear there, and deny my identity if he dare."

The voice continued, ignoring the interruption.

"You will follow me peaceably, or I shall be compelled to ray you."

Thalma threw her arms wide, signaling their helplessness.

"We follow, helot!" she cried aloud. To Dunning she whispered: "One flash of their ray-gun and there will be nothing left of this stratocar but some dust. Marnota would like nothing better."

The view-screen cleared. Close at hand they could see the police-car, hovering. The voice came again.

"Keep within a hundred feet of us. Remember, the slightest swerve from that position and I blast." The blue-banded stratocar began to move, and with trembling fingers Thalma pressed down the levers to follow.

CHAPTER IV

Death Behind the Arras

FASTER and faster the two spheres cleaved the air, till below there was but a tinted blur. The hazy earth dropped away, was a great bowl, then rounded again into a far-spread convexity. Dunning peered at the control board.

"Look here, Thalma. The time-lever you pressed returned automatically to neutral position. That must mean the time mechanism is set to make just that one leap of approximately four hundred years. That gives me an idea. All we have to do is press the other handle. We'll shoot back to my time—I'll see that you're taken care of there for life." His hands darted to the board.

Thalma thrust it aside.

"No!" Low-voiced as the exclamation was, inflexible determination sounded in it. "No, Jim, I cannot. I must remain in my own time. I must meet Marnota face to face and accuse him of his crimes. My father's memory cries out for vengeance, and the downtrodden people lift their hands to me in mute appeal. Something here," a white hand pressed against her heart, "tells me that he cannot triumph."

Dunning's hand dropped from the levers, and he was silent. He could not argue against the burning vision in Thalma's grey eyes, the fire in her low voice.

"But *you* can easily escape." The girl turned and pointed. "There, just in front of the couch, is a trapdoor to the lower hull. Hide below there, among the coils, till I am taken away. Then you can steal out, shift the time lever and go back to the twentieth century."

"No!" Dunning told her firmly. "I'm staying here—with you."

They were slowing now. Below was a far-spreading, white city. Great towers reached upward to the dropping sphere. The rooftops were landscaped gardens. Airy bridges leaped in a gossamer network across mile-deep chasms. Dunning glimpsed the Hudson, almost hidden beneath many bridges.

In the middle of a watery expanse Dunning recognized as New York's Upper Bay a circular building brooded, black, ominous. Straight down to its flat roof the sphere with the blue band drifted, and Thalma followed. The roof opened, dividing into many leaves that slid one under the other, and a round gap showed. The leading stratocar dipped within.

Guards in bright green uniforms surrounded them as they emerged from the stratocar. Two mercenaries ranged themselves on either side of Dunning and the girl, seizing their arms at the elbows. But just as they started forward a voice rang out.

"Sergeant Farston!"

The leader whirled, and saluted the communication disc. "Here, sir," he snapped.

From somewhere among the half dozen private police crowding around him Dunning heard a gasped, "Marnota, himself!"

"You will bring the prisoners to me, at once!"

"Yes, sir."

"Gosh, the chief has listened in on damn near everything the last week!" someone said, low-voiced.

Presently they were marched to Marnota through a circling corridor whose marble walls showed fine veinings of gold. Then the party was being challenged by a sentry before a doorway curtained by cloth of gold.

"Halt! Who goes there?"

"Sergeant Farston and prisoners."

"You will pass in at once, Sergeant, with the prisoners. Orders are to dismiss the rest of your men." The guard drew the curtain aside. A bronze portal behind it swung open.

DUNNING had a confused sense of tapestry-hung walls in the room they entered, of a floor covered thick with glowing rugs. But a tableau at the other end of the chamber, fifty feet away, caught and held his attention as the sergeant halted him just within the closing door.

On a great carved chair of ebony in the center of a gold dais, sat a small thin man whose black eyes gleamed piercingly out of a sharp-featured, hawklike face. Thin lips were twisted in a cruel, sardonic smile.

Marnota's stubby hands rested on the arms of the thronelike chair, and it seemed to Dunning that the short fingers curled and uncurled like the claws of a cat toying with a helpless victim.

Thalma approached him fearlessly, her slight form straight and defiant. The girl's arm was outstretched, her hand pointed at the throned man.

"Remember, Marnota," her clear accents rang out, "in the end, you will fail, and terrible will be the price you pay."

Thalma's arm fell to her side. She swayed a bit, then drew herself again proudly upright. A rustle of sound drew Dunning's eyes away from her. He started. Behind the rich tapestries, to the left of the entrance, someone was hidden, someone in the green uniform of Marnota's helots. He saw a black death-cylinder, ominously ready.

Marnota's sadistic smile deepened. There was amusement in his silky tones.

"Splendid!" he said. "You are a marvelous actress. No wonder you were selected to come here with your absurd claim to be my niece. Unfortunately the forger who concocted the note that preceded you was not as skillful as the surgeon who remodeled your features."

He turned toward Dunning and his guard.

"Ah, Sergeant, you arrived a little more quickly than I anticipated. But I'll be through soon, very soon. You may leave your prisoner here, and go."

The sergeant saluted, turned sharply, and was gone.

"I shall be finished directly, young man. Just step to one side."

Marnota turned back to Thalma. "Yes," he purred. "You are a wonderful actress. Too bad you have allowed yourself to be duped into this imposture. However, you will not be able to deceive the court. You may go."

Thalma turned wonderingly toward the door. And suddenly Dunning understood Marnota's amazing show of leniency. The lurking mercenary was posted to flash the girl down as she passed. If there were an inquiry, the explanation would be simple. Balked in her attempted fraud, she had tried to escape, had been rayed by an over-zealous guard. The cylinder would do its work well, there would be no chance for troublesome identification. He was the only witness. He would not be alive to testify.

Thalma came slowly across the floor, straight toward the waiting assassin. Dunning whirled. His great hands spread wide, caught the arras on either side of the form behind it. He lunged forward, tearing the fabric from its fastenings. He toppled, fell heavily, with the writhing, heaving bundle in his arms. A tearing dart of flame seared his shoulder. He located the round of a head under the cloth, and slugged at it. The wrapped, entangled figure slumped beneath him.

DUNNING leaped to his feet—glimpsed Marnota, standing on the gold dais, blue flashes crackling from his ray-gun—saw Thalma, just outside the open door, struggling in the arms of the outer guard.

Dunning was a maelstrom of lightning action, the very swiftness of his movements foiling Marnota's darts. He sprang through the opening, thrusting at the door as he went. The clang of its shutting drowned the smack of his fist as it splashed into the snarling face of the guard. The helot jarred loose from Thalma. His hand shot to the ray-gun, jerked it from his belt. Before he could use it, hard knuckles exploded again on his jutting jaw, and the mercenary crashed to the floor.

A siren moaned an alarm. Dunning twisted to Thalma. She was snatching up the guard's weapon from where it had spun as he fell. Its blue ray shot out, spattered against the edge of the bronze portal. The metal glowed red and fused where the heat vibrations impinged.

"The lock," the girl gasped. "That will hold him for a while."

The siren's wailing rose to new fury. From around the curve of the corridor shouts came and the thunder of many rushing feet.

"They're coming!" Dunning exclaimed. "We've got to get out of here!" He whirled to the right, hesitated as from that side, too, clamored an oncoming rush still hidden by the arc of the circling hall. Aside from the sealed entrance to Marnota's audience chamber, the black marble walls were without a break. "Finish!" he groaned. "We're trapped!"

"Not yet," Thalma snapped, her face white but her eyes bright and fearless. She was at the wall opposite the bronze

door. Her hand reached out to it, her fingers pressed the center of an apparently aimless whorl in the gold tracery. A narrow rectangle of stone shot down into the floor, revealing a black void behind. "Quick! In here!"

Dunning was on her heels as she darted through. Some gesture of the girl's, indistinguishable in the darkness, sent the secret panel thudding back into place.

He crouched, listening. Had they been swift enough? Had the screen closed in time to conceal their retreat from Marnota's men? Or would the cracking of heated marble show that the ray-guns were at work, seeking out the fugitives?

Muffled noises, the moaning siren, guttural calls, an authoritative voice in sharp command, came through the wall. Behind him, Thalma's heavy breathing gusted and the beat of his own pulse hammered in his ears. The air was musty, stagnant. Dust, long undisturbed, choked him. Fierce agony seared his shoulder, sent tendrils of pain raying through him.

A hand tugged at Dunning.

"Come!" Thalma's voice was an almost inaudible whisper. "We've got to get out of here before Marnota frees himself and directs his stupid helots in their search."

The endless passage twisted, pitched downward, so narrow that Dunning's arms brushed the walls on either side. In the tar-barrel darkness even Thalma's white garments were invisible. Dunning clung to her icy, trembling hand, let it guide him down and down.

"This is the way I went when I thought I was escaping from Marnota, as he planned I should think. Jarcka, Ran's father, was in charge of this building's construction, shortly after my own father's death. He must have foreseen I should some day need a hiding place. By a minute adjustment of the building machines, he contrived this secret passage, with outlets in my own quarters, in the corridor from which we just came, and in the wall of the strato-car hangar. It also connects to a secret tunnel under the Bay, into the city."

"Secret! But thousands of men—"

THALMA answered swiftly. "Only Jarcka himself knows of it. He used Thorgersen's Mechanical Mole, converting earth and rocks into energy, reconverting some of it into a lining for the bore, harder and more rigid than steel. I— Oh-h!"

She broke off in a wail of terror. The tunnel had flared into a sudden luminescence. The walls glowed with a cold, infinitely menacing light.

"What is it?" Dunning gasped, leaping into new effort after the bounding girl. "What—"

"The search rays. The kappa-light that penetrates all inorganic matter. Hurry!"

Far behind ruptured marble crashed, and the confined space echoed with the awed snarling of the human hunting-hounds. The passage dropped steadily, curved dizzily, leveled out. Twisted sharply—and ended against a rust-red wall!

"Hell!" Dunning gasped. "We're cut off." The clamor of the following helots was appallingly nearer. "We're lost."

"No," Thelma cried, springing to a stance in front of the apparently impregnable barrier. "We're saved." She thrust the captured ray-gun into Dunning's hand, gestured queerly with raised arms, as if in invocation to some strange god. "It's the tunnel doorway. Eighteen inches of beryllo-steel. Once we're past it, it will defy the rays for hours."

Dunning whirled, crouched, his burning eyes on the angle that cut off view of the passage through which they had come. Pounding footfalls, shrill cries of the pursuers, made a fearful sound about him, and behind him Thalma's voice went on.

"Its lock is worked by beams of invisible, infra-red light. Only Jarcka and I know the combination." Thalma explained her fantastic actions. She was blocking off the guarding beams, one by one, with her waving arms. When she finished—

A green uniform hurtled around the corner Dunning watched, and toppled headlong to the impact of his beam. Another, and another, coming too fast to save themselves, met the same fate.

The narrowness of the passage forced the pursuers into single file. The bodies of Dunning's victims jammed the way. His position was unassailable—as long as his weapon's charge lasted!

Behind him he heard a little exclamation of triumph, and the squealing of ponderous metal on metal. It told him the door was moving. His victims were piled across the corridor, a breast-high mound of contorted corpses that would hold the helots back for minutes.

"Jim!" There was sudden terror in Thalma's voice. "Jim! The portal is jammed. It will not open!"

CHAPTER V

The Bomb

DUNNING'S tone was calm. "Try again. It must open."

"No use. The electric eye responded to my gestures, and the door started to move, but something is in its gears, blocking it. I can do nothing."

"Well, they'll know they've been in a scrap before they get us," he said grimly. "Hey—"

An ovid object, black, fist-size, arced over the tangled bodies, hit the wall. Pounding footfalls sounded.

Horror struck at Dunning.

"Down, Thalma!" This thing was a bomb, an explosive grenade. He leaped to it, snatched it up, hurled it over the cadavers, far up the tunnel.

A tremendous detonation crashed about him. Consciousness left him for an instant, then flooded back. Every bone in his body ached, his head whirled, but he was alive. The glow induced by the kappa-light search beams was gone, and impenetrable darkness blanketed sight. "Thalma," Dunning shouted, "Thalma!"

"Here, Jim," a weak voice answered him. "Are you all right?"

"Fine as silk. And you, girl?" Dunning pulled himself to his feet and groped in the direction of the voice.

"I-I'm a bit dazed. But there aren't any bones broken. Will we ever get out of here?" Sudden joy replaced the doubt in her accents. "Jim! I can feel the jamb against which the door rested. It's open, Jim! The explosion must have blown it open. We can go on, now. We're safe!"

"Great!" Dunning exclaimed. "And Marnota thinks we were killed! Otherwise he'd still be using the search-rays."

"That's right. He's sure we're out of his way at last. There's a surprise coming to him. Now I wonder if I can get this barrier shut again." Dunning heard Thalma moving in the darkness. "No. The shock must have damaged the photo-electric control. We shall have to trust to the debris to hold them back. Come on. I shan't feel safe till we are well out of here."

The footing rose, abruptly. Thalma's fingers on Dunning's arm sent an electric tingle through him.

"The end of the tunnel, Jim!"

He sensed that she was standing before some unseen barrier, again was going through the fantastic gyrations that opened locks in this fantastic world of the future. Abruptly there was a vertical line of light in front of him. It grew rapidly wider, filling the tunnel end. The light blinded Dunning's eyes, so long used to darkness.

And then there were vague forms about him, many hands seizing him. Thalma screamed. Dunning grunted, jerked. He couldn't break the grips that held him. He was helpless! Caught! After all they had gone through they were caught! Marnota had outwitted them. He must have known all along of this tunnel.

"Salom!" It was Thalma's voice, strangely joyous. "Jarcka! Let him go. He's my friend. He saved me."

The hands dropped. A circle of men, stalwart, clad in flowing, pastel-hued cloaks, hemmed in the girl and himself.

EACH was armed with a ray-tube and the face of each was alight with a peculiar exaltation.

"Salom!" Thalma was speaking to one of them, tall grave-countenanced, grey-haired, the evident leader. "How did you know to come and meet me? How did you know I would be here?"

"We didn't," the man replied. "We

thought you lost. We were determined that Marnota should not live till tomorrow to claim your estates. We were going through the tunnel to raid his lair. To surprise and slay him."

"Thalma." Another spoke, shorter, his stern visage seamed with anxiety and grief. "Marnota broadcast a report that you had been killed in an explosion of your stratocar. Ran, too, has disappeared. Do you know anything of him?"

Thalma turned to him, and there was compassion, pity, in her eyes.

"Ran is dead, Jarcka. He gave his life for me, when Marnota attempted to murder me."

Jarcka staggered, as if a physical blow had struck him, and then was straight, stalwart as before.

"It is high time to put an end to Marnota's crimes. Let us proceed, Salom."

A sigh gusted through the group. They started toward the tunnel entrance. Thalma barred their way.

"Stop! You cannot go through. The tunnel is blocked."

"But you have come through it."

Thalma told them what had happened. When she had finished there was silence for a moment. Then Salom made a hopeless gesture.

"It was our last, desperate hope. Now America is lost indeed. Tomorrow morning Marnota will appear in court to demand immediate title to your half of the company. Under the law it must be given him and—" Again his gesture took the place of words.

"Tomorrow! Where, Salom?"

"In the Federal Court, before Judge Layton. Layton is on our side, but he is bound by the law. He will have to—"

"You forgot that I am alive. The law is on our side now."

"Marnota will defy the law. He will not retreat now. He has the power—and he will use it."

"No!" Thalma's clear voice rang out, and she was living flame in that dim chamber, her face aglow with a light that was somehow blinding. "He has the power. But we have right on our side. Salom. Jarcka. Take me to a safe hiding place. We have all night to think. To plan. We shall find a way to defeat him."

"Impossible," someone muttered. "He is too powerful."

"OYEZ, oyez, oyez. The court is open!" In ten centuries the immemorial formula had not changed. On the wall above the long, ornately carved bench still was pictured the ancient representation of the blindfolded goddess, with her balanced scales. The justice, in his high-backed chair, still wore the ancient black robes. Judge Layton was a short, slender man, stooped a little under the weight of his years and learning. His jaw was grimset as he surveyed the scene below him.

The row upon row of chairs that filled the courtroom were occupied, every one, by hard-visaged men who wore the green of Marnota's cohorts. Each held, ready in his hand, the black cylinder of his ray-gun, and the eyes of each was fastened immovably on the countenance of his master.

Marnota sat at the counsel table, his bearing that of a monarch deigning to appear before his subjects. There was an aura of power, of dominance, about him, and in the sharp blackness of his eyes there was a glow of triumph. Overflowing the seat beside him, the flabby, bulging contours of him gross and sensual, was Ranta, head of the Adams Company's legal forces.

At the other end of the long table Salom sat, his face an imperturbable mask. Save for the clerk of the court at his desk, and a single attendant policeman contrasting ludicrously with Marnota's armed display, he was alone. He seemed the leader of a forlorn hope, checking for the last of innumerable times the disposition of the enemy and his sparse preparations for battle.

He glanced at the huge, bronze entrance portal, at the small door behind the bench that led to Layton's chambers. And finally at two screened openings in the ceiling, openings that Dunning might have identified, had he been present, as the voice outlets for the communication system of this twenty-fourth century world.

"The matter of the settlement of the estate of Thantala of the House of

Adams." Judge Layton's voice was thin and quavering. "Any motions?"

Ranta rose with a mock bow.

"Your Honor." His mellow accents filled the great chamber. "I appear for Marnota of the House of Adams, brother of the decedent and his sole surviving kin. We move that the title to all property of the estate be vested in us."

Salom was on his feet. "Your Honor, I appear to oppose this motion."

"Representing whom?"

"Representing Thalma of the House of Adams, daughter of the decedent."

A little rustle passed through the great room.

"I object," Ranta thundered. "Thalma of the House of Adams is dead. No attorney can represent a dead person."

Salom's voice remained calm and low. "I submit, your Honor, that the death of my client has not been proved before the court. The presumption is, therefore, that she continues to live. I move that the guardianship of Marnota of the House of Adams over the body and goods of my client, as set up by the decedent's will, be declared at an end, and that title to the property of the estate be vested in my client."

Ranta riposted, quickly.

"We have submitted affidavits from several persons who state definitely that a stratocar, in which Thalma of the House of Adams was known to be, was seen by them to explode in the air above the Pacific Ocean. We have the affiants in court and are ready to produce them."

JUDGE LAYTON turned again to Salom.

"That seems to settle the matter, counsellor. Do you demand that these witnesses be placed on the stand?"

"That will not be necessary, your Honor. I can prove the existence of my client to the court's satisfaction."

"I defy you to," Ranta roared. "You cannot prove what is not true!"

Salom's voice never rose. "I can prove Thalma of the House of Adams to be alive."

The lawyer turned, and pointed to the massive entrance doors. As if his gesture were a signal, they started to swing slowly open. Eternity seemed to pass as the space between the huge bronze leaves widened. Salom's quiet words thudded into a deathly silence.

"Your Honor, Thalma of the House of Adams."

A slim figure stood in the aperture. The paleness of Thalma's set face matched her white garment. Only her eyes were alive, darkly grey, as they sought and held Marnota's gaze.

The crack of the judge's gavel cut short a rising murmur. "The motion of Marnota of the House of Adams is denied. I grant—"

"Stop!" Marnota's cry cut short the words. He was on his feet. As if at an unvoiced command his helots had also risen. "I've had enough of this farce. What you grant or deny is no concern of mine."

"What do you mean?"

"You and your law have no power over me. My men have surrounded the White House, have invested every army barracks, every police headquarters, in the nation." He raised his right arm high above his head. "When my arm drops, the signal will be flashed, and the government whose law you administer will be at an end. From now on *I* am the law!"

"Marnota!" Thalma's voice rang sharply from the door. "Marnota! You will never give that signal!"

The bronze doors clanged, shutting her out. Swift action exploded in the courtroom. Salom, with agility beyond his years, lifted himself over the barrier, and leaped to the little door behind the judge's seat through which Layton, the clerk and the lone attendant had already darted. A roaring sound filled the chamber.

At first like the growling of some vast impending cataclysm, it shot higher and higher in pitch. In seconds it was a shrill scream, slashing at the nerves of the imprisoned Marnota and his helots, invading their quivering brains with needling pain. Then there was no longer any appreciable sound. But Marnota, feeling thin agony whipping through his body, knew that the vibrations still kept on, high above the upper limit of human hearing.

At the great bronze door, at the

smaller exit through which Salom had escaped, frantic knots of green-clad men worked with their ray-tubes to force an escape. Some, deprived of reason by the searching torture of the unheard sound, clawed maniacally at the unyielding metal. A pandemonium of curiously muffled shouts burst out.

As the myriad cells of tortured bodies shattered into dissolution under the inexorable, destroying vibrations that unceasingly poured out of the communication discs in the ceiling, cylinders dropped from palsied hands, legs crumpled. The courtroom was a tremendous shambles of writhing, dying humanity.

THE invisible, inaudible, vibration of vengeance kept on. Marnota, still holding himself erect by the force of the tremendous, twisted will that had been his undoing; his face empurpled by the bursting capillaries of his skin, his eyes dark pools of torment; glared through a blurring haze the heaving, dying mass that had been the flower of his army. He strove to speak, but the cords of his throat refused his bidding. Slowly, with a defiance still radiant from his pain-wracked form, he slid to the floor. The arm that was to have given the signal for his coup flung out, quivering — There was not the least stirring of any form in all that crowded room.

Thalma's eyes held no jubilance, nor Dunning's as they stood in the doorway of that courtroom that was a tomb. After a while they turned silently away.

"Just what happened, Thalma? I know that you arranged with your secret adherents to have some kind of machinery connected with the communication system that led into the courtroom, and turned on at your cue. But I can't understand how it could have done—that."

The girl's voice was very very weary.

"Some time in the twentieth century it was discovered that bacteria in milk could be killed by using sound waves above the upper limit of audibility. This process was extended to other foods, but when it was attempted to cure disease by the method, it was found that while the pathogenic bacteria were killed by the vibrations, the patient, also, was killed, or injured.

"What we did was simply to connect the sound-sterilization machinery of the Central Milk Plant with the communication system of the courtroom, and turn the tremendously amplified vibrations into the courtroom."

Jim Dunning was silent again for long minute.

"You're safe now, Thalma, and all the great power of the Adams Company is yours," he said finally. "You can carry out all your father's plans, unhindered, and make this country a paradise."

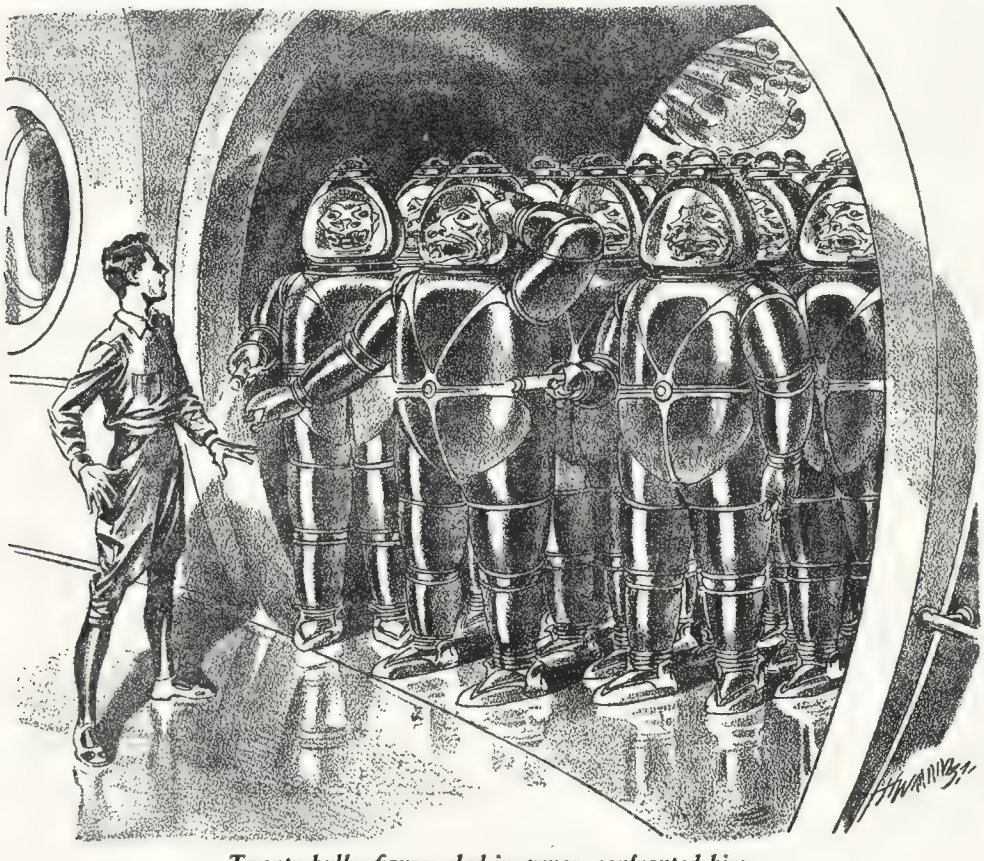
The girl's voice was very soft.

"If it hadn't been for you that could not have come to pass. I should still be—lost in time." Silence, again; and at last she spoke. "It's a great responsibility, Jim. Will you help me?"

In the grey eyes that looked into his Dunning read something that thrilled him. He knew that the world was theirs—for always.

Think of it! A pint of lather from little more than an inch of Listerine Shaving Cream. Such laboratory data gives you an idea of the wonderful quality, the downright economy, of this cream which is winning men by thousands.
LAMBERT PHARMACAL CO., St. Louis, Mo.

Alone on a Dead Star an Earthman Faces the Terror of Extinction—but Scientific Strategy Saves Him!



Twenty bulky figures clad in armor, confronted him.

DARK SUN

By RAYMOND Z. GALLUN

Author of "Saturn's Ringmaster," "Old Faithful," etc.

NORBERT PONS did not like to be alone here. Always, in the gleam of instruments, and in the smells and sounds, and other details of his environment, there was a suggestion of ever-pending menace.

He would try to relax in his quarters, which were quite as comfortably appointed as if he were at home on Earth. He would try to read or sleep, but sooner or later dread, and the memory of his responsibility, would drive him out into the halls and chambers where complex elements were refined, and where machines hummed with quiet efficiency, keeping fearful natural forces at bay.

He would look at the tremendous pillars that supported the roof of the refining plant; and he would wonder what would happen to them, and to himself, if something chanced to go

wrong with the gravity-reduction system.

"Those pillars would break like dry twigs!" he'd tell himself. "A man would flatten out like a rotten fruit that a dinosaur had stepped on! A dark star is no place for a human being to be! Mass makes gravity, and the mass of Khoraba is countless millions of times greater than that of Earth. Why, if the gravity-reducers weren't busy, I'd weigh something over a hundred tons!"

For many minutes at a time, Norbert Pons would stand at some high-placed window of the plant and stare, gaunt-faced and haggard-eyed, out over the awesome and almost featureless terrain of Khoraba, where natural law itself seemed curiously warped and hostile.

There was starlight here, as at home. The Pleiades were all about this monster sun that had blazed gloriously during another era of cosmic history. But the nearest of those Pleiades was still several light years away. They gleamed with harsh brilliance in a black sky, for there was very little atmosphere here. It had not been dissipated by molecular leakage into space; rather, its own weight had forced it into the substance of the dense, black rock of Khoraba's surface.

Only a tenuous and shallow layer of hydrogen, lightest of elements, remained of a once mighty blanket of gas. Clinging close to the ground, it glowed with a faint phosphorescence induced by electrical emanations coming up from Khoraba's still tremendously heated interior.

The expanse of the dark star's surface was utterly level. No mountain or hill could have lifted its crest against the drag of the gravity. There was little to break the drab monotony of that limitless plain except patches of glowing, dusky red, which marked the positions of hot lava pools.

SUCH was Khoraba, named after some horror of Martian myth. On the desolate immensity of its outer shell, the refining plant, which had been assembled in space ten years ago and lowered into position with its gravity-reducers functioning, was like a button carelessly dropped on the Sahara.

Norbert Pons wasn't a coward—at least not in most ways. Death had threatened him often during the interplanetary war in which Mars and Earth had defeated the Venus-Ganymede-Europa coalition. But those hectic moments of struggle seemed child's play to being the only man on Gargantuan Khoraba. There had been gay moments of relief, then, with his comrades, and when death came it was swift. Demolition beams dissolved matter instantly, no gruesome remnants remained, and the feeling experienced by the survivors was more a feeling of vague surprise than of horror.

Pons had never seen a man crushed in the inconceivable grip of a dark sun, yet his fancy could fill in the knowledge gaps with ghastly vividness. There'd be a wide blot, irregular in shape like a bloodstain, with maybe a white fragment of bone projecting up from it here and there. In Khoraba's pull, most organic solids would act like liquids.

It was not a pretty picture to hold crystallized in one's mind, particularly when one knew that he must stay here alone for a long time. Old Hans Epstein, veteran guardian of the refinery, had died of a heart-attack. Pons, his youthful assistant, but recently introduced to the mysteries of Khoraba, and by no means accustomed to his surroundings as yet, must carry on until another expert was brought from Earth.

Khoraba's titanic gravity made it the source of substances which could not have come into being on any sphere of much smaller mass and density. Only the terrifying pressures existing within Khoraba could have produced elements as dense and complex as those numbered 205 to 221 of the Periodic Table. These heavy, tremendously hard and refractory materials were now vital to the sciences and industries of civilization.

Pons' position would not have been so bad if there had been sufficient work to do, or if he had had human companionship. But with Hans Epstein dead,

both of these things were denied him. All the machinery was automatic and almost perfect. It needed supervision only because no mechanism can quite be trusted.

During the first month after Epstein's death, Pons' existence was one of growing tension, that mounted rapidly toward nightmare pitch. His constant worry about the functioning of the gravity-reduction system's power units might have done irreparable harm to his mind, had not reason told him that he must find a way to relieve the tension. And so he began to build a small remote-control apparatus, operated by radio.

This apparatus was not difficult to construct. Within a week it was completed. It consisted of two small black boxes.

One of these was located inconspicuously in the rear of the switchboard that stood in the power chamber of the gravity-reducers. It's operation disturbed not at all the normal action of the various devices on the switchboard. The meters there could still be read accurately, and the levers and dials could be worked there, just as before.

THE other box was portable. Pons could keep it with him at all times, no matter where he was, if he so desired. Its meters and gauges could tell him at a glance just how well every part of the gravity-reduction system was operating. It also had duplicate controls with which readjustments could be made, just as if he were actually in the power chamber.

Now that he was thus equipped, Norbert Pons' nervous dread was less acute. He ate and slept somewhat better. Fundamentally, however, Khoraba seemed just as terrible as it had before. Grimly, the youth awaited the arrival of the freight ships from Earth.

At last, far out in the star-sprinkled void, there was a flicker of rocket-tubes. A dozen vessels had crossed the transdimensional passage from the Solar System. Pons watched their approach from a window of his quarters. Their repulsion plates glowing incandescent in their tremendous battle with the pull of the dark sun, they slanted grandly toward the landing stage. The atomic energy of many pounds, Earth-weight, of uranium, was freed in the task of bringing them to rest.

Norbert Pons was almost choked with relief as he rushed through passages and rooms, arriving at last before the great entrance air-lock. For a little while now, he would be able to talk with people from home. Clumsy with haste, he worked the valves of the air-lock.

"Hello there!" he called cheerily, as the inner portal of the lock opened.

His happy smile of greeting did not change for a second. Then, gradually, the expression on his face became one of idiotic surprise. Twenty bulky figures, clad in space armor, confronted him. A half dozen demolition tubes were pointed menacingly at his breast. Pons saw the icy glitter of cruel reptilian eyes behind the glazed fronts of oxygen helmets. He saw the hobgoblin grins of fanged mouths, and the iridescent sheen of reptilian scales that reflected the glow of illuminators.

Norbert Pons recovered quickly from his consternation. He knew that he faced merciless enemies, but he had faced their kind before. Helplessness he felt, but the acute danger of these animate foes was not as fearsome as the constant, brooding threat of Khoraba.

"Well?" he questioned coldly.

One of the intruders opened the face panel of his armor. Guttural English, thick and blurred, issued from the broad, troll-like mouth.

"We of Venus are never truly conquered, Earth-scum," he said. "You know why we are here. We shall take over the plant. The loot of Khoraba shall make us strong. We shall build new fleets, and new engines of destruction. Our work shall go on until every Terrestrial and Martian has ceased to be! Now my faithful ones shall confine you to your lair until I determine what end is most appropriate for you!"

Pons was unarmed, and either protest or resistance could have had but one result—instant death. Presently he was a prisoner in the room where he slept. A guard stood in the passage

before the door. The latter was locked, but it was provided with a small, round window through which the guard could peer. The place had been carefully searched, for weapons. Escape from the thick, metal-strengthened windows was definitely impossible.

Still, Pons should scarcely have been helpless. Circumstances had combined to give him an opportunity the like of which few captives have ever enjoyed. Resting on a stout metal table was a little black box, whose simple capacities could now be used to accomplish a grim purpose. The Venusians, recognizing it as a crude radio device of some kind, but not studying it closely enough to determine its true purpose, had not troubled to remove it.

BEYOND the windows of the room were visible the grey, rakish forms of the war vessels. The majority of the Venusians who composed their crews were still aboard them, and would probably so remain until the party of twenty had completed the investigation of the plant. By now the repulsion plates of the ships, working on the same principle as the gravity-reducers here, would be completely shut off.

Inevitably and automatically, Norbert Pons' attention was drawn to the black box. His personal risk in what he contemplated doing, would be small. If everything went as it should, the reducer plates here would continue to work as usual. The gravity-reduction system of the entire plant was divided into twelve sections, each of which could be operated separately. One of these sections was under the floors of Pons' living quarters alone. The activity of the other sections could be decreased as much as desired.

Now the Earthman strode toward the box. His hands reached out. Then, oddly, his movements were checked. A flood of cold horror welled up from the deeper recesses of his mind. His cheeks whitened, and he began to tremble. He could not force his fingers into contact with the dial that must be turned if the Venus fleet was to be destroyed. To shut off any portion of the gravity-reduction system seemed more terrible to him now than suicide by leaping into a white-hot furnace would have been.

The science of psychiatry records many strange and similar cases. People who live normal lives are seldom subject to such quirks. But to a person living in the malefic environment of Khoraba, life is automatically abnormal.

Brave men, even on Earth, have learned to feel terror for things far less dangerous than the gravity of a dark star. Reason frequently tells them that their fears are magnified, but emotionally they cannot accept the truth.

Norbert Pons had stayed too long on Khoraba, the inconceivable giant of the void. By slow stages it had thrown its morbid spell over his nervous system. He could not grasp all the causes for his fear yet, for those causes thrust their roots deep into the shadowy regions of his mind. Only accident might bring him better understanding.

Roaring, snapping sounds reverberated thunderously in his thoughts. They were like the sounds of the collapse of rigid metal, suddenly too heavy to bear its own weight. He pictured men reduced to bloody slime, and the horror of the vision was too unnaturally clear for his self-control to master. He who had gone calmly through an interplanetary war, moved backward away from the box, and threw himself, face downward, upon his bunk. A dry sob rattled in his throat. Norbert Pons' dread was beyond mere personal danger now.

For an hour or more he lay cursing himself, and fighting his useless inner battle. He could still hear the steady drone of machinery, and now and then guttural Venusian voices, conversing in low tones.

Then a key grated in the lock of the door beyond which the guard was stationed. The guard entered, followed by the hideous leader, who had ordered Pons' temporary incarceration.

The Venusian aristocrat spoke his thick, blurred English, coming swiftly to the point:

"I have arrived at a decision, Earthman," he said. "The gravity of Khoraba offers me an opportunity to get

rid of you in a unique and interesting manner. I am going to expose you, unprotected, to that gravity, Earthman. I wish that I could do the same to your entire race."

NORBERT PONS was sitting up on the edge of his bunk, now. His eyes and face went dazed and blank as he listened to the sentence. His consciousness heard it and grasped it. Yet, curiously, the overwhelming wave of utter emotional collapse, which logic told him should result at once, failed to come. Rather, the sentence brought to him a curious sense of relief.

Pons was far more than merely puzzled. How could anyone explain his strange, paradoxical reaction? It was just this sort of death that he was most afraid of, wasn't it? Or was it?

His knowledge of psychology was scant. He did not see at once the difference between fear born out of long and morbid brooding, and the fear that comes from a sudden and not altogether expected danger. The latter can be far less damaging. It is not the actual clash of battle that does so much to ruin morale; it is the monotony of waiting for a catastrophe that can happen within the next second or the next hour or the next week.

The young Earthman did not immediately realize this truth, but after a moment the core of his fear arose into his conscious mind.

Uncertainty had become grim fact now. There was no reason to suppose that the Venusian leader had lied when he had pronounced sentence. But it was not fact that Norbert Pons had dreaded so much, but uncertainty—the knowledge that there was danger, and the endless suspense of waiting for it to strike. Out of this suspense had come his morbid visions.

This uncertainty was over now, and so there was a faint spark of relief glowing within Norbert Pons. The check on his natural courage was relieved. He looked straight into the cruel, reptilian eyes of the commander of the Venusians.

"Mind if I have a cigarette before you take me out?" he asked quietly.

The Venusian bowed with facetious grandiloquence.

"Certainly that is a small favor to grant to one so soon to perish," he replied. "Ooboh, give the Earthling a cigarette, and light it for him."

Ooboh, the guard, responded quickly to the commands of his master, but took the precaution of keeping his demolition tube trained on the captive.

"Thanks," Pons murmured.

For a minute he sat smoking and planning. He did not look at the black box, which rested out of reach on the table, for he did not wish the attention of the Venusians to be drawn to it.

Presently he evolved a simple scheme. There was danger in it, but he was reasonably sure that at least part of it would work—if the awful terror that had gripped him before did not return.

When his cigarette was half smoked he arose very slowly from the bunk, his eyes turned toward the Venusian leader who stood close at hand.

"Well," he said in a mild tone. "Let's be getting along. I dislike waiting."

At his first move, Ooboh, the guard, had leaped to the door, his demolition tube ready, but Pons seemed not to notice. His every act and gesture was calculated to check any hint of suspicion.

"So be it," said the Venusian leader.

With slow, listless, but precisely premeditated steps, Pons walked toward the door. Beside the stout metal table he paused, as if gripped by a momentary absent-mindedness, which, under the circumstances, could not have seemed odd. Idly his fingers began to fumble with the litter on the table-top — papers, pencils, books, pipes. Many of these things might have been the relics of fond memories, to which he, a condemned man, might now be saying farewell.

THE Venusian aristocrat behind him did not hinder, though Pons could guess that his cold eyes were watching him closely, and that there was a demolition tube pointed straight at his own back.

Gradually the Earthman turned his

attention to the black box. The dozen dials on its top were within reach now. Each of those dials controlled one of the twelve sections of the gravity-reduction system.

Now was the moment to act, if there ever was to be such a moment. Pons felt keyed up, as with a touch of stage fright. There was suspense in this situation too, but it was not the product of a long period of morbid brooding, which was now ended. It was the simple, thrilling suspense of a man, fighting the enemies of his race.

Still moving his hand slowly, he reached for the number 3 dial, which controlled the gravity-reducers under the landing stage. As if to do so were only a bit of idle fumbling, he twisted the dial to the zero point. The landing stage was now receiving the full weight of Khoraba's pull. There was no audible sign of any result, for what atmosphere there was, beyond the walls of the plant, was too thin to transmit sound. The eyes of the Venusian remained fixed on their captive, and so they were not warned.

Pons felt a wave of fierce exultation. He had surmounted his ghastly fear, and he had accomplished his main objective. But he did not look through the windows toward the landing stage now, for he did not want to betray himself to his watchful captors.

His fingers moved to dial 1, which controlled the reducers directly beneath the floor on which he stood. He leaned forward a little, against the edge of the table. Then he turned dial 1 a tiny bit toward zero.

The result, however, seemed quite out of proportion to the minuteness of the turn. Norbert Pons, yanked by the sudden magnification of his body-weight, pitched forward to the top of the sturdy table. He heard a grunt behind him, and then a clang of metal as a demolition tube, weighing many times more than it should have, was torn from the grasp of the Venusian leader and jerked to the floor.

Both of the Venusians were taken completely by surprise. Neither had known what was about to happen, as Pons had. Ooboh, who stood by the door, dropped his weapon a split second after his master had done so. Then he crumpled up like a thing of jelly, and lay pinned to the floor by a tiny fraction of Khoraba's gravity. A heavy thud told Pons that the Venusian aristocrat behind him had fallen too. Now the Earthman heard the rasping sighs of labored breathing.

Pons was sprawled on his stomach on the table-top. His heart and lungs were toiling painfully. Blood was being literally pulled from his brain, making his consciousness vague and dim. Yet he was surprised that the sensations he was experiencing were not as terrible as he had once anticipated.

With ponderous effort he turned his eyes toward a window. The shapes of the vessels on the landing stage were changing slowly as the materials from which they were made yielded to the full strength of Khoraba's attraction. They were flattening out like lumps of soft mud set on a board. By now, every Venusian inside them was dead. There had been no time to put the repulsion plates in operation.

From beyond the door of the room, Pons heard excited mutterings, which reminded his hazy consciousness that there were things yet to be done. He gasped for breath. Then his hand, which seemed to weigh a hundred pounds, groped toward the black box a few inches away. He gave each of the ten dials which he had not previously touched a quarter turn toward zero—enough to kill, but not enough to damage seriously any machinery. There were peculiar, heavy sounds, and the excited mutterings ceased.

THEN, once more, he groped for the number 1 dial. He turned it a very little more, gradually, so that the further increase in his weight would not overstep the ultimate limit of his endurance. At first every fiber of his body shrieked a protest of agony, then numbness began to set in. Pons' act was dreadful self-torture, but it had a purpose. Venusians were accustomed to a slightly feebler gravity than Earthmen; hence, logically, a Venusian's endurance to the pull of Khoraba should be slightly inferior to that

of an Earthman.

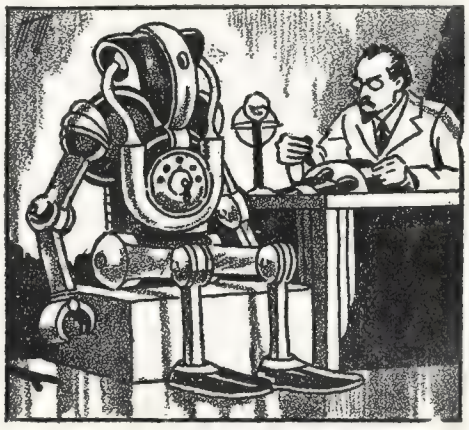
He waited until he knew that his consciousness had almost reached its limit. Then, slowly once more, to avoid the danger of any sudden change, he returned the dial to its normal position. Once more his body was approximately Earth-weight.

After a few moments he was able to stand on his feet again, Ooboh and his master were inert but still alive. Pons left them where they were until he had readjusted all the dials. Then he dragged them to a small closet, and locked them inside.

Before beginning a tour of inspection through the plant, he stood for a minute before one of the windows which afforded a view of the landing stage and the wreckage upon it, and the black plain beyond. His head ached furiously, and his flesh was damp with sweat, but within him there was a strange, refreshing lightness, and a sense of freedom from an elusive and terrible burden.

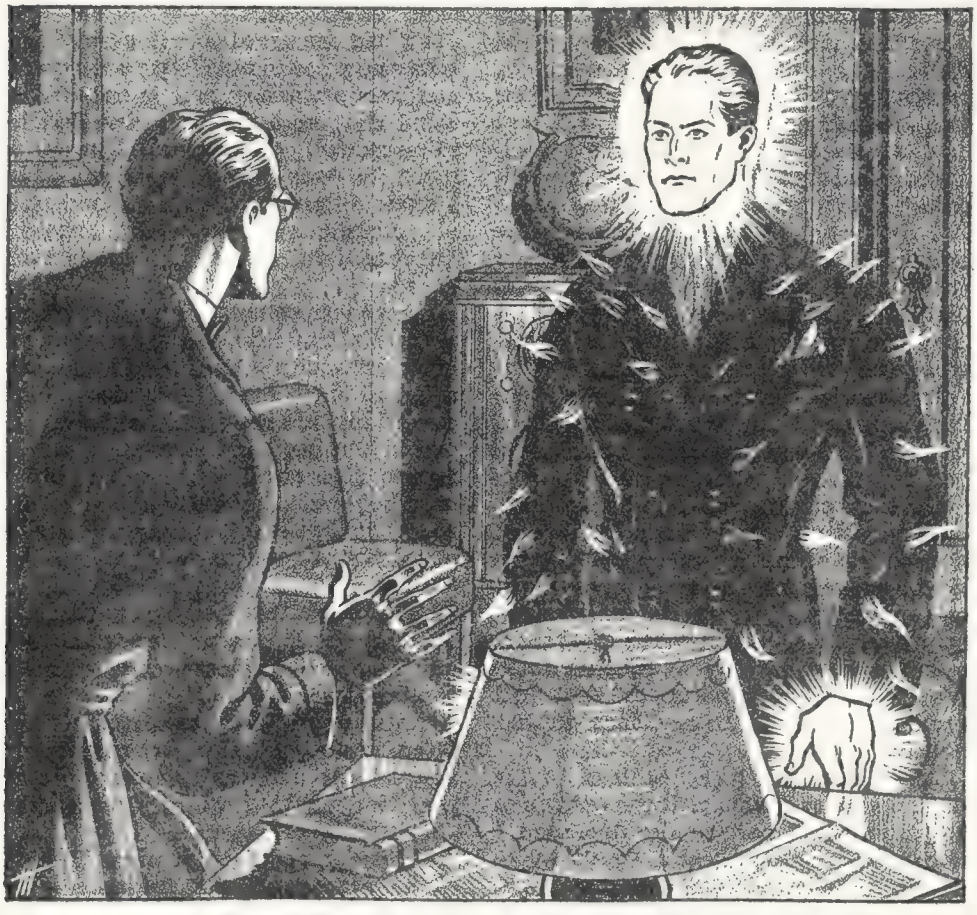
There was a new and unaccustomed friendliness in the aspect of the dark star now. Even the thin, glowing atmosphere, and the Pleiades above, seemed to smile. The forces of this dying colossus of space had yielded to his will and had fought in his favor. Though they might threaten, he would never fear them again. He knew that the wait for the freighters from Earth, would not seem so painful now, or so long.

"Khoraba, old girl," he muttered gently, and then he laughed.



Next Issue: THE IRON WORLD, a Complete Novelette of Robot Rebellion by OTIS ADELBERT KLINE

The Vanguard of a Race of Star-Roamers Probes the Universe for a World that is—Edible!



In the dark his face and hands glowed with a phosphorescent luminosity.

DARCONDRA

By RICHARD TOOKER

Author of "The Green Doom," "Day of the Brown Horde," etc.

I CANNOT vouch for the truth of all that happened on that chill January night in 1935. Such an incredible experience is all too likely to leave one with a doubt as to his sanity at the time, especially when months of suffering and shock have followed as a contingent aftermath.

But this I can vouch for—a memento that will remain with me the rest of my days, and even until death reduces my flesh to dust—a livid, crescent-shaped scar across my breast—a scar that burns and festers anew periodically, with a pain so excruciating that it seems but yesterday that Darcondra marked me with his blighting wrath before he vanished, let us hope forever, from the ken of the race he coveted as an envoy of star conquerors.

That night I had left my study desk early, and after several hours of absorbed tinkering with the electrical experiments which were my hobby, I sat down at midnight to relax with the customary tall glass of rum toddy. The fireplace had never seemed more cheery as I lay back, drowsing in the Morris chair. I had just picked up two new and remote stations with my short-wave set, and my old theory of inevitable television was fast materializing. I was reviewing the thesis of my next article for the *Reform World*—to defend the practicability of television—when the knock came at my door.

It was a queer sound, not at all like human knuckles would make, but more like a tiny hammer-head muffled in a leather stall.

I got up puzzledly. I hadn't expected any callers. My bachelor study and hobby lab were remotely located in Walden Park. Even in milder weather few callers interrupted my voluntary seclusion. And with the thermometer at ten below, it seemed nothing short of an emergency that had brought some one to my door at that hour.

As I turned the lock I noticed a faint radiation of warmth, as if the cold snap had broken. I opened the door and I was momentarily dazed not only by an unquestionable wave of inrushing heat but by the remarkable aspect of my visitor.

"Good evening," I said, almost subconsciously.

"Good evening," a voice replied—a voice hollow and metallic, which, while the mouth opened and the lips moved, seemed to issue indeterminately from somewhere in the chest or abdomen.

"You are Walter Selds, the science writer?"

"I am," I affirmed a bit stiffly, looking my caller up and down in an amazement and suspicion which must have been obvious in every lineament of my face.

"You will pardon my boldness, I am sure, when I inform you that I bring a message of sensational significance to Earth science."

"*Earth* science?" I couldn't help emphasizing the planetary qualification, "Why, certainly—" I hastened—"I'm always interested in new discoveries. Come in."

I'd had the usual experiences of press men and science publicists with quacks and monomaniacs and it crossed my mind that here was another that had to be tactfully disposed of. But the moment the door closed behind my visitor I knew different. This man had an air of dynamic assurance—and more; he impressed me with a vague, quickening dread.

There was something awesomely unnatural about him, an impression joltingly fortified by the inexplicable radiation of heat from his body or from something hidden in his clothes. My parlor had been comfortably warm before he entered; it was now uncomfortably hot—and the heat was remarkably like that thrown off by large quantities of rotting vegetation.

HE didn't take the overstuffed easy chair I offered, but sat down stiffly on a hard-bottomed stool beside the fireplace.

"Will you join me in a toddy?" I invited, while mentally gathering my resources for defense against any criminal violence that might threaten from this midnight visitor.

"Thanks, no," he cut me off shortly. "I have no need of stimulants as you may have observed from the temperature of my body. We will dispense with all subterfuge immediately. My mission concerns the future of all human life on this planet, and I must impress you from the beginning that any attempt you may make to thwart me will mean the swift destruction not only of you and your entire race, but every trace of human handiwork on the face of your Earth!"

So astounded was I by this blunt ultimatum that I could only stand and stare. Under any other circumstances I'd have considered myself confronted by a lunatic, yet the metallic, triphammer tones of the voice as it delivered its imperious ukase, the emanation of alien heat, the subtly alien aspect of the man in several particulars, transfixed me with an awe and misgiving that an ignorant savage might experi-

ence upon confronting one of his idols in the flesh.

"First of all, you must be convinced of my identity," the voice rasped, the eyes burning intensely, fiercely compelling, into mine. "Study me carefully."

He arose to oblige me.

A man of medium height and weight, of undistinguished features. At first glance he might have answered the description of any of a thousand average Americans. The overcoat, suit and hat were commonplace. There was nothing unusual in the form except the rigidly erect carriage. The strangeness lay deeper than that—an odd, glowing pallor of the skin—an unnatural brightness of the eyes—and that persistent aura of pungent heat given off through his clothes.

"There is certainly nothing usual in your — er — personality," I faltered, checking a husk in my throat as I became more certain than ever of an incredible other-worldliness in the deeper aspects of my visitor.

I saw his gleaming eyes flash to the reading lamp and thought I noticed a glimmer of fear or uncertainty as he said brusquely:

"Turn out the light."

There seemed nothing to do but comply. I heard him mutter something under his breath as I pulled the switch chain, plunging the room in darkness save for the flickering flames of the fireplace. Then I was blanching at the spectral change in this self-invited guest who was fast proving himself the master in my own house.

In the dark his face and hands glowed with a faint, phosphorescent luminosity. And through the fabric of his clothes I noticed tiny sparks flying off and vanishing like the disintegration of radium seen under a powerful microscope!

"My God!" I cried. "Who—what are you?"

"Turn on—the light." Again I noticed a slight hesitancy in his tones, some repressed association of uncertainty with the light.

AS I snapped on the light feeling like a man in a trance, my inquisitor stepped jerkily to the library table and picked up the daily paper.

He pointed to an item on the front page. "Read that."

I had already read the gruesome story. A car found burned at the side of a lonely road two days before, its owner missing, the body presumably, but unaccountably, entirely consumed in the flames. The man's name, discovered by tracing the motor serial number, had been Ralph Bates.

"My body is that of Ralph Bates!" rasped the voice. "But I am a Storla of the Cosmos, and my name in your language is Darcondra."

"Darcondra!" I repeated numbly. "You mean to say you are life from outer space?"

"Exactly!" the answer was impatient. He ripped open the paper to an inside page, tapped one finger to a brief item concerning the falling of a small meteorite in a nearby township.

"It was not a meteorite that fell that night," he informed me curtly. "What they saw was my landing upon Earth in my natural state. I am a scout, as you call it, for the legions of my kind, who are at present swarmed on the edible worlds of Alpha Centauri, your nearest star system."

"Edible worlds?" I echoed the startling phrase, which seemed to choke me in its utterance.

"Precisely. Perhaps you know, or have theorized, that life is relative, as is true of all states of matter and even distances in terms of infinity?"

"Yes," I stammered, "Herbert Spencer expounded that theory years ago and others have elaborated on it since."

"It is, of course, a mere theory with you regarding life in the Universe, but you have seen, or will see, that it is a fact with the Storlas, who have seen it demonstrated in a myriad other forms of life throughout space. We Storlas are ionized protoplasm, that is as nearly as I can convey a definition of our substance in your language with its mental limitations.

"Our sole means of subsistence is the energy you call electricity, whose source originates in the magnetism of a planet body. We live somewhat like your storage batteries, and when we

exhaust the stored energy of a world we migrate to another and other worlds. Incidentally, when we leave a world, it is in the process of disintegration for want of the magnetic preservative you call gravitation."

I looked in frank horror into the hard, brilliant eyes, felt a qualm of nausea stealing through me from the waves of alien heat that beat incessantly upon me from this infernal visitation in human guise.

"And what have I to do with all this?" I muttered. "You astound me with statements of incredible powers, yet you come to me as if I could be of service in my feeble earthliness." Sarcasm crept into my tones, a desperate sarcasm, for I wavered between a conviction of my own madness and the terrible dread that the millennium was at hand. "For instance—you might demonstrate how you assumed the form of this Ralph Bates whom you have evidently murdered."

THERE was no hint of irony or resentment, no emotion whatsoever in his voice or manner as he replied—only impatient haste, and an egotistical indifference to me as a personality or even an important factor in his opposition.

"Ionized protoplasm, as we have evolved," he explained swiftly, "may take any shape and appearance of substance it chooses provided actual contact can be effected with a model. You have a process by which you transmute metals to a certain degree. In the concentration of copper, for instance, you may immerse a piece of scrap iron in a sulphuric or hydrochloric acid bath, and in time the iron is replaced by copper. Precipitation, I believe you term it, the Douglas-Hunt process. It is the identical principle by which I assumed the physical matrix of Ralph Bates. I am not, of course, actually mere protoplasmic flesh. Note this—"

He stepped to the fireplace, plunged one hand into the red-hot coals, which glowed white immediately, blistering the room with heat. For nearly a minute he held his hand in that miniature furnace before he withdrew it and displayed the member uninjured. Before I could recover from my amazement, he turned to the library table, picked up a curved oriental knife that I used as a letter opener, and as I staggered back in stupefaction, he calmly passed the blade through his neck as if the flesh were mere butter.

Holding the severed head in its hands, the headless corpse confronted me motionlessly for several minutes with no sign of bleeding. Then the arms moved mechanically, set the head back on the stump of the neck, where it fused in place immediately, a tiny band of sparks showing briefly where the ghastly incision had been made.

Darcondra's lips moved again, the eyes awakening with supernal life.

"You observe," he droned on, "how futile would be any effort to oppose me in my wishes. Your bullets, explosives, acids, even your death-rays could not destroy me. I neither breathe nor eat as you do. You might rend me to atoms with your bombs, and I would re-coalesce immediately, wreaking a frightful vengeance of utter destruction upon my would-be assassins. As for my destructive powers—if I exerted but a fractional degree of the dormant heat possible for me to generate and radiate at will, I would fuse you and this house to powdered ash. The entire neighborhood would be left a charred ruin, where not even plant life could ever find root again."

My terror knew no bounds now. Either I had gone stark mad or I faced the most terrible peril that had ever descended upon mankind and Earth. Edible worlds! Devouring conquerors of the cosmos, sweeping from star system to star system, sapping the very foundations of life from the matter that fostered it!

Surely no man had ever visualized such a crisis, let alone confronted it in cold reality. I alone knew of this thing. One puny, protoplasmic human against this indestructible demon of stellar space—this godless monster who was the vanguard of a world-destroying horde.

I panted in the insufferable stench of body heat. Sweat bathed my brow and palms that was not wholly due to

temperature. I must carry on—must in some way circumvent this Caliban's ghastly designs.

"But I still can't understand what I can do for one of your infinite powers."

I GASPED, hands clenching as I steadied my tottering will to think and act with some measure of effectiveness.

"You are convinced, then, that I am what I have said—that nothing you or your race can do can thwart me?"

"I can't help believing the testimony of my senses," I confessed, weakly.

"Then you will coöperate fully if I promise mercy to your race?"

"Mercy!" I cried. "What mercy could such monstrosities offer who sap the very foundations of a world's existence?"

Again no smile, no human reaction whatever. Like a relentless, intellectual machine, Darcondra droned on.

"You have no choice but to accept my propositions on my own terms." He snatched up the knife with which he had severed his head, clenched it in his fist. A blinding, choking wave of heat seared my face. Then the knife fell leadenly to the floor, a lump of cooling, blackened slag which no longer retained even its virtue of malleability.

"I accept!" I cried. "Tell me what you wish, but in the name of universal life, let me intercede for the innocents of my kind. Anything—anything—"

He sat down mechanically, and I thought I caught a crafty evasion in his fishy glare.

"There is an interference to our migration here — a mere trifle"—unmistakably I noticed again that flicker of uncertainty — "you have an unprecedentedly crude means of utilizing the natural energy which is the Storla's life flame. I refer to your electricity. These power systems are offensive to us and will cause us no end of irritation and inconvenience when we come in great numbers after my return to Alpha Centauri with reports of an edible world in this system. You are a well known authority on science publicity, in a position to communicate effectively with the presses, the radio broadcasting units and the seats of political power. In fact, it was your signature to various news features that prompted me to trace you through the directory. Under my direction you will inform all necessary authorities that the electrical power systems throughout the entire world must be completely demolished as soon as possible."

"But I can't guarantee—" I was momentarily stunned.

"Of course they will think you mad," Darcondra interrupted impatiently. "I anticipate that. But you will follow up the ultimatum with an announcement of a demonstration to prove my existence, my absolute power. On a set day I will destroy utterly any designated aggregation of matter. I will permit your powers to choose what shall suffer the test, and at the stated hour I will consume it. If other demonstrations are necessary they shall be provided with largess—but without further choice of your powers as to where my vengeance shall fall. Sporadic destruction will continue until the powers of all Earth nations begin a concerted demolition of all electric power conduits, storage and generator plants. There must be no vestige of artificial electrical generation on Earth when the Storlas arrive."

"And the mercy you offer humanity?" I implored. "What shall I tell them—some hope to hold out for our survival as a race?"

Darcondra did not speak for a moment.

"There are other worlds," he said presently and with obvious indifference. "We may assist you in devising transportation to another world in your system. Beyond that I can promise nothing."

I knew then that Darcondra's offer of clemency was but a subterfuge. This monster of alien life had no morals, no compunction whatever as to honor in gaining his ends in the frightful foraging of his fellow hosts. I did not breathe my conviction, but I knew from then on that if I served as mediator for Darcondra I would be an instrument of humanity's destruction—nay, even of Earth's destruction as a habitable planet in space.

ONE dim ray of hope remained—the one hint of weakness I had been able to discern in this terrible creature's supernal armaments. Electricity! Our "crude" method of harnessing the invisible power that permeated the Universe. At every mention of electricity in Earth connotation I had observed a fear — if fear it could be called — of our voltage conduits and power stores.

Emotionless though he was, I had perceived this dread behind Darcondra's subterfuges of "irritation," "inconvenience." This ghoul of worlds would never have trifled with indirect negotiations if our electrical developments were actually a "mere trifle" in the Storlan conquest of Earth.

"It will require thought—it is a great undertaking," I stalled, desperately. One hand, slippery with sweat, fumbled to a box of cigarettes on the table. I took one with trembling fingers, placed it between my lips.

"No thought is necessary!" Darcondra rebuked me impatiently. "Merely dictate duplicate telegrams to all the departments of power by means of your telephone."

He was watching my cigarette with a curiosity tinged with contempt. He didn't seem to notice my hand move to the electric lighter on the table, wired from a plug in the floor. In my flair for electrical apparatus, a parlor lighter was but one of many a freak extravagance in such appliances.

Darcondra's hand rested along the edge of the table as he sat rigidly, staring at me coldly, compellingly. The lighter switch, in the process of opening and closing, invariably emitted an arc of crackling, hot sparks, which could induce an unpleasant shock if contacting one's flesh.

Suddenly, with my heart in my mouth, I opened the switch and shoved the tiny, sputtering arc at Darcondra's inert hand. I knew I faced probable instant death, but I was hardly prepared for all that ensued.

Darcondra leaped back, uttering a grating screech. His eyes bulged in livid terror, fixed in fearful fascination on the sizzling tongue of flame from the arcing lighter.

I feigned surprise, abject apology, with all the courage I could muster. Darcondra's fear and fury reacted apparently spontaneously. His clothes smoked with a flicker of released heat. I saw his pallid, glowing skin redden like blown embers before he regained full self-control, an instant later.

As I drew back the lighter, switched it off, he was glaring at me as if he would read my mind. Those terrible eyes were asking, "How much does he know? Can he suspect the truth?"

"I was overwrought—I didn't realize," I groveled. "It is only a lighter for this weed we smoke."

"It is nothing," he said coldly, completely recovered, once more a consummate master of guile. "I am amused by this vandal means you employ in utilizing the vital forces of the Universe. It is a deplorable waste. All such devices must be destroyed with their sources of generated power. You will begin mediation at once." And he pointed to the telephone on a small table at one side the archway between the parlor and my laboratory where the lights were turned out.

MY SENSES swam giddily as I got up, the cigarette dangling cold and forgotten in my lips. My heart hammered until it seemed the rush of blood would blot out all consciousness. In that moment I prayed that I might faint. I knew the secret of Darcondra's fear—yet how could I use it? What certainty had I that my first play in a tragic drama of trial and error would win?

He followed me closely to the telephone stand. The stifling heat of his nearness, the charred scent of his clothing, so nearly aflame a moment before, unnerved me. I was no hero for an ordeal like this—yet no man, not the veriest craven, could do other than make one desperate stand to save his race and world from annihilation. If I blundered I would be destroyed with doubtless thousands of innocents in the vicinity. And then another would serve in my stead.

"Proceed!" Darcondra's voice grated harshly in my ringing ears. "Procrastination can avail you nothing."

But my eye had alighted on an empty contact socket hanging on its long connection cord beside the telephone stand and just inside the shadowed laboratory. As I sat down to the telephone my left knee was within a few inches of the terminal of the cord. It was a socket I used in experiments requiring a build-up of high voltage.

The step-up transformer on its stand against the wall inside the lab was in darkness, and I divined that its significance would not be clear to the creature even if he did discover it. In that high tension socket, near at hand, at least several thousand volts were on tap at a turn of the switch, for I recalled leaving the transformer at a high build-up.

With my right hand I began scribbling notes and addresses on the pad beside the telephone. Darcondra watched me alertly on the right. I dipped down and up with my left hand, testing the socket switch in the movement to make sure it was open. Again my left hand strayed down to the socket as I took down the receiver with my right, called central.

Talking loudly, excitedly to cover my secret maneuvers, I worked frantically with my fingers, plucking out the contact coil in the socket sleeve, until it stuck out like a serpent's tongue. Now, with one quick turn of the socket switch, I knew that if I touched the protruding contact point, I would shrivel to ash in seconds. What it would do to Darcondra I could not foresee, nor did I care. It was my first and last chance to win.

Darcondra tensed as he seemed to notice for the first time the suspicious movements of my left hand. He started to step behind me, to investigate, when I swept up the socket as if I held the haft of a knife. One wild yell I sounded as I buried the contact point in the Storla's luminous face.

A hideous screech blended with my own mad shout. I felt a withering band of flame sear my chest as a satanic hand raked me. A blast of weltering heat—then a jagged ribbon of blue flame hissed and blazed where Darcondra stood under the high voltage circuit.

I saw his clothes wilt and wither in a smoking glare, and as I reeled forward blindly with a despairing cry I knew that the monster had vanished in the grounding of the circuit in the earth beneath the house.

THE chill of the outer night aroused me later. I dimly recall crawling on hands and knees along the street, the house wrapped in furious flames behind me. I do not remember who found me or when. I was taken to a hospital in delirium, frightfully burned.

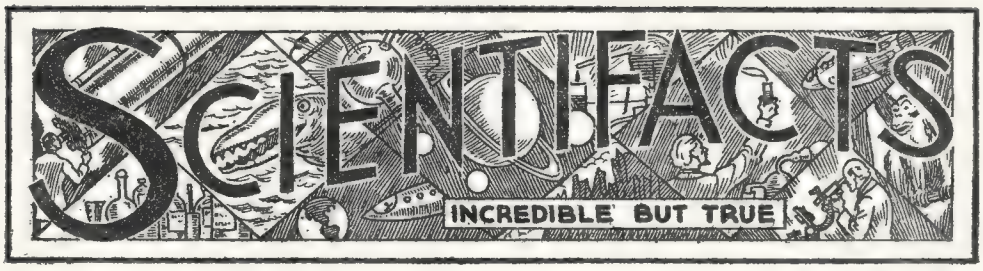
My recovery was tediously slow, complicated by a nervous malady allied to shell-shock. For months I was hardly ever rational. The burn on my breast, where Darcondra's hand had raked in the instant before the high voltage disintegrated him, was last to heal, its condition sorely puzzling the doctors.

It was generally presumed by my associates and the press that I was burned accidentally during an electrical experiment which also set fire to the house, and that the shock of the ordeal affected my mind. In truth, no sign of anything unusual was ever found in the ashes of my house in Walden Park.

And so I have only the scar as corroboration. Darcondra, scourge of eternity, if he was ever as real as my memory pictures him, vanished utterly in the process of some annihilating fusion with the high tension circuit. He alone could explain the phenomenon, if in his evident dread of our power, he fully understood it himself.

Now a haunting dread lives with me of what the future may hold for Earth and my fellowmen. Can we long hope to evade the descent of another envoy of the Storlan hordes? And will there be one fortunate enough to thwart him in his ruthless designs as I did?

Sometimes I entertain the faint hope that Darcondra, being indestructible, was not really destroyed — that his blasted atoms reformed again in space, returning to his kind with a tale of terror that will forever absolve Earth from ultimate pillage by those scavengers of the void that somewhere, at this hour, are sweeping in meteor masks from world to world, leaving unmortal devastation in their wake.



A BRAND-NEW, FASCINATING FEATURE

By J. B. WALTER

BOUNCING GLASS!

A NEW product has been introduced recently to the market which may quite properly be considered a resilient glass. It has all the desirable qualities associated with glass

and in addition a number of additional properties that have been sought for many years in a perfectly transparent hard glasslike product. It is a polymer of methyl methacrylate. It may be colored or it may be produced clear as crystal, free from the slight tinges of green or yellow found in ordinary glass.

It is non-shatterable, and can be drilled by an ordinary drill or cut with a regulation saw. A tumbler made from this product will weigh but half as much as one made of ordinary glass. If dropped on a hard floor, instead of breaking into fragments, it will bounce from the surface and remain intact.

WE SEE BETTER THAN FLIES

THE eyes of man are three hundred thousand times as efficient as the eight hundred eyes of the housefly. The eye of the housefly is compounded of four hundred non-focusing eyes called "Ommatidia" which lead directly to the brain. The eye of the dragonfly is compounded of about thirty thousand ommatidia. No wonder popular opinion has credited these insects with phenomenal vision!

But the eye of man throws a focused image upon one hundred and thirty million tiny rods and cones, each of which conveys a message to the brain. Thus the human eye is more than three hundred thousand times more efficient than the eye of the housefly, and more than four thousand times as efficient as the eye of the dragon-fly.

THE SOLAR SYSTEM IS THE OFFSPRING OF TWO SUNS

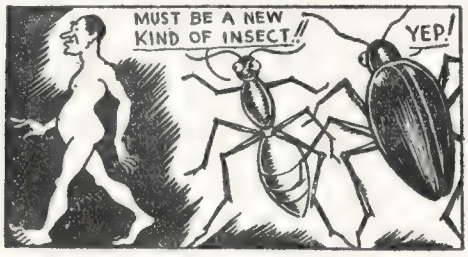
FROM the earliest days of astronomy, scientists have been offering theories to account for the planets that circle our sun. None have been suggested that have not met with serious objections. The newest theory which has not been seriously challenged to date, is that the sun was a twin to another similar great orb. For centuries they circled about each other in space. Then a disturbance caused these twins to collide. The fragments from that ancient cataclysm produced our Solar System.

TERMITES OUTLIVE MAN BY MILLIONS OF YEARS

FOR all his vaunted superiority, man must bow to the cockroach, the ant, and other termites, when one considers the most important achievement of all, the ability to go on living, whether conditions be favourable or otherwise. Neither glacial epochs, nor world wide disaster has destroyed the termite.

Man and all the species of man, has been on the earth, by the most liberal

calculation, less than thirty million years. But the termite, with little change, has been shown by scientists



to have been an inhabitant for more than three hundred and sixty million years.

EXTREME COLD PRODUCES MUTATIONS

THE story of evolution is a tale of variation between parent and offspring. The Darwinian theory explains the gradual change caused by changing environment. Slight changes occur from generation to generation, each change adapted to fit the offspring more perfectly that his parent to meet the changing conditions, until at length, the early ancestor resembles the living species but remotely. But there is another change, called mutation, which is sudden and abrupt. Normal parents may bear a giant, or a dwarf. A white violet may bear red flowers.

Such changes may be caused by changes in the germ plasma. The causes of changes in the plasma may be many. Three new ones may be added to the list. X-rays, cosmic rays, and exposure to extremely low temperatures all may cause a mutation.

LIFE'S DIVIDING LINE

THE bridge between living matter and inanimate is passed. In the lowest form of life there has always been a sharp dividing line that set it off from inanimate matter. The scientist has always been able to say that cellular matter which was able to reproduce was live matter. While no matter how greatly complicated was the molecular structure, inanimate matter was that which had no faculty to reproduce.

Live matter never had been crystallized, nor has it had a molecular formula. But Dr. W. M. Stanley has released his studies of the virus which causes disease and destruction to the tobacco plant. Since it is self-propogating, it is surely living matter. But since it crystallizes and its molecular structure can be clearly formulated, it is surely inanimate. It is not too much to predict that it will be made in the laboratory from simple elements since much more complicated chemicals have been synthetised. This test tube product will live and reproduce. Simple life will be made by the chemists.

DR. BLOWFLY!

THE maggot, which is commonly known as the blowfly, infests and breeds in wounds that have not had proper attention. But very serious wounds have healed more quickly

when inhabited by this unpleasant insect life than when kept clean and antiseptic. When faced with serious wounds which would not yield to the most expert medical treatment, physicians, who had observed this phenomena on the battle fields of France, deliberately infected the wound with a colony of maggots. Especially in the treatment of serious bone injuries, they got quick and excellent results.

In cases of osteomylitis, a bone disease, the maggots cured cases that neither medical nor surgical treatment could help. About two years ago it was shown that it was not the blowfly itself but an excretion it produced which effected the cure. The excretion is known as allantoin. Today allantoin has been synthetised in the laboratory, and there is no further need to employ the unpleasant looking, but helpful, insect.

The CHESSBOARD OF MARS

Professor Thode Combs the Entire Ether Spectrum in Search of the Elusive Psycho-wave—and Discovers a World Saturated with Vibrations of Hate!

A Complete Novelette

By EANDO BINDER

Author of "Judgment Sun," "From Dawn to Dusk," etc.

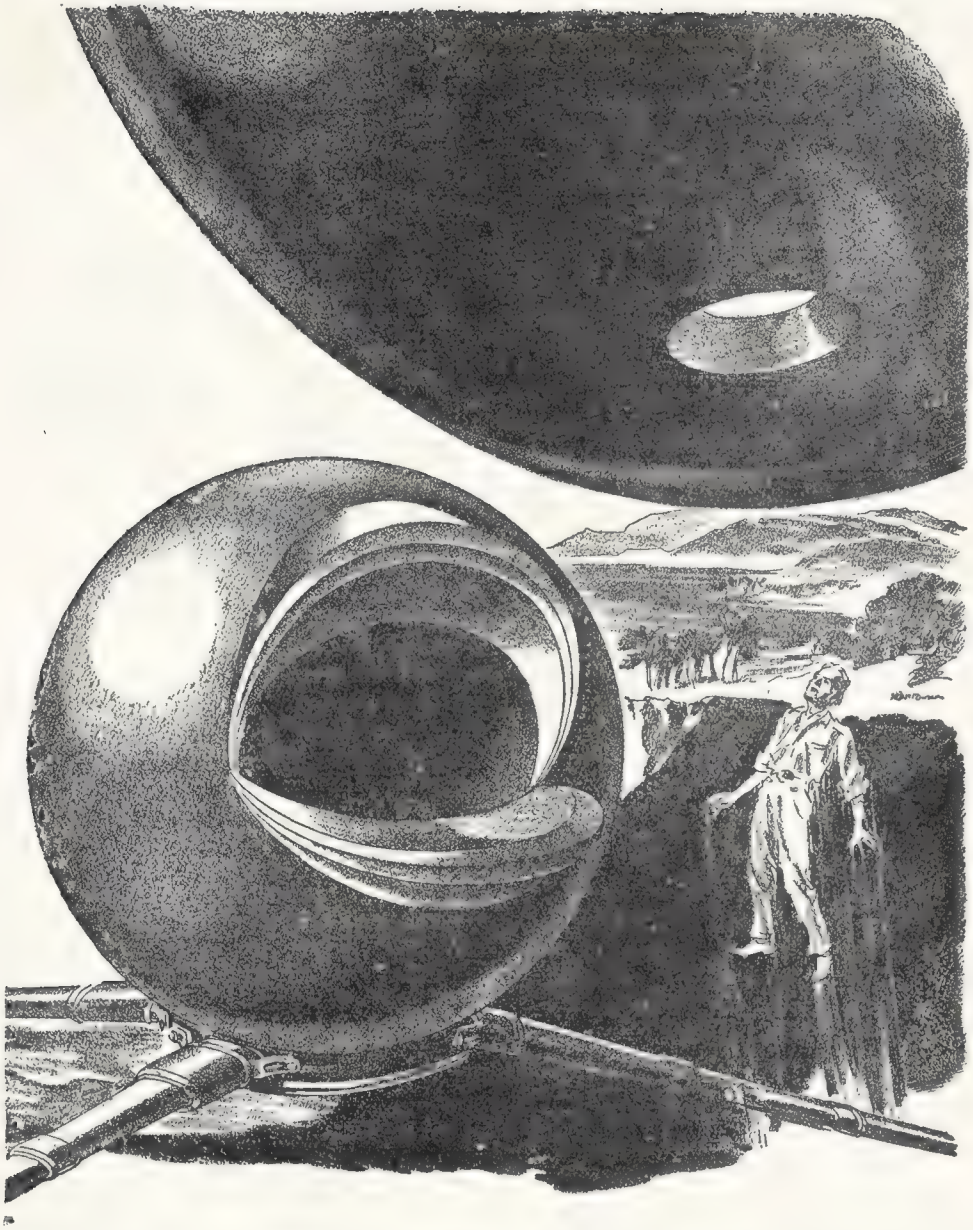
CHAPTER I

The Great Change

STUPENDOUS things have happened in this world, but nothing as stupendous as the Great Change that came over Earth in 1938. At first it was just a subtle change, hardly noticeable. It was not a physical change. Continents did not sink, nor did tidal waves engulf cities. Nothing visible or tangible occurred at all. Nevertheless, it was different.

Manifestations were numerous, yet hard to define. First of all, a greedy

He saw the professor being catapulted into the hole.



little nation dreaming the dreams that Caesar and Napoleon had also once dreamed, suddenly and inexplicably withdrew her powerful navy from the Hawaiian Islands, thus taking away the threat of war between herself and another great power. At the same time she demobilized from the Siberian front, when it was expected that within a month she would have swept into the wheat fields of the north, robbing them from a frantic European nation. Not long after, these two enemies signed an everlasting peace treaty.

That was the first major indication of the Great Change. It was not long after that the big powers of Europe, so delicately balanced on the verge of a disastrous war, demobilized from opposing frontiers, almost all at once. And in another few months a dozen short and honest treaties made war remote and unthinkable. Before a decade had passed, all Europe united to form a commonwealth for the betterment of all concerned—a union not in name only, but in fact.

These astounding results in the in-

ternational field were matched by equally amazing changes in the general, everyday life of mankind. People began to grow kinder toward one another. A feeling of brotherhood sprang up and waxed stronger day by day. It is safe to say that a person taken from the twentieth century prior to July, 1938, and transported suddenly to July of 1939, would swear he was on some other world than that he had known, because of the difference in human relationship occasioned by the Change.

For instance, up in the hills of Kentucky, two lanky, bearded, drawling-tongued backwoodsmen, armed with rifles, faced one another shyly and finally shook hands. That was in September of 1938. A few months before those two would have shot it out between them, for their feud went back a hundred years. And so on and on.

It was as though the human race had labored for countless centuries under an incubus of evil, which had suddenly, in July of 1938, been wrenched away from Earth and flung into the nethermost voids of space. . . .

THE two experimenters stood before a sprawling apparatus on the workbench, whose various unorthodox parts were connected with strands of silvery-looking wire, but paler in color. A modest fortune in beryllium lay there, and its many lines were to carry a new type of energy—a leaping, sizzling kind of energy that would have burned copper to vapor, and would have caused even silver to weaken and soften. Some of the coils of beryllium were immersed in vats of liquid air to preserve them from a like fate.

A dialed panel reposed at the center of the maze, with a series of button switches and illumined indicators over its surface. Hardly breathing, the two men watched the meters as the professor slowly twisted one dial after another. Up above, hung from the ceiling, and connected to the panel by a single wire, was a triangle of delicate wiring, again beryllium.

It was the aerial for psycho-waves.

Suddenly there was sound, and the two men stiffened attentively. Yet it was not sound! Nothing came through the air from the apparatus to their ears, yet they seemed to hear voices! Voices that went directly to their brains, without going through their auditory organs.

They were simply thought-waves, vastly amplified by the psycho-receiver, and so powerful that they impinged directly on the auditory seat of the brain.

In awe and wonder they looked at each other's toil-lined faces as they heard the cacophonous voices of a million different people. They were hopelessly entangled, like a radio receiver attuned to the entire wave-band at once.

"The voice of the world!" whispered Professor Thode almost reverently. "The constant flow of thought that whirls about our heads and is never heard except in a few instances. Every human on Earth must always be thinking something, but the thoughts can never be detected except by supersensitive minds, and then only under exceptional circumstances—those carefully arranged experiments in telepathy. With this sort of receiver and amplifier, one can be in touch with all the world's thoughts at once. Listen now while I turn the selector dial." His face held a rapt expression.

The scientist twisted the dial and clutched at his chest as a dry cough bent him almost double. He would have fallen except that Fred Bilte, his assistant, caught him in strong arms and helped him to a chair.

"Success, Fred! Success!" cried the old scientist weakly when his coughing had subsided.

That ecstasy of achievement had cost them ten years of painstaking research, and most of the professor's fortune. Ten years before, Professor Boris Thode, retired from the industrial boom that had enriched him, had said:

"The mystery of thought! How is it born? How does it manifest itself? Regardless of the contempt that science associates with telepathy, I truly believe in it, and believe that thought can be transmitted as readily as voice, as light, as electricity, if only we knew the means!"

AT the time it had seemed to Fred Bilte that they had completely lost themselves in a maze of pseudo-science. They pursued research that was only half science, the other half something beyond.

They had combed the entire ether spectrum in the search for thought-waves. Cosmic rays, gamma rays, X-rays had been the first three steps. Then had come the examination of several octaves only slightly explored by others. The ultra-violet, visible light, and infra-red had been dissected for their purpose. Another little known gap in the scale next, and then the radio waves, and finally the alternating current waves.

Each of these had been suspected in turn of being the range of psycho-waves, but what they had sought had not been found.

They had gone further. Above the scale they explored waves that were possibly the answer to the condensation of nebulae, but were not in any way related to thought radiation.

Then, below the cosmic rays, they came across radiations, half electromagnetic, half something else, that were closely related to gravitation. These had proved to be a sort of transition product between ether emanations and waves that had no measurable velocity. Just as the Archaeopteryx was a transition between reptiles and birds in prehistoric times.

The Z-rays, they were tentatively named. They had a shorter wave-length than the cosmic rays and a still more terrific penetrative power. They were apparently the next step above the gravitation rays, which were undoubtedly infinitely penetrative. In common with the latter, these Z-rays had an almost infinite velocity in that mysterious sub-ether beyond the electromagnetic ether.

It was only a year before that the professor had said, eagerly, tensely:

"All electromagnetic waves have a constant speed, something over 186,000 miles a second. These new Z-rays below the cosmic, of a different order, must have a far higher speed, possibly beyond measurement. And the penetration of thought, though figurative, is proverbial! Come on! There's work ahead, and hope!"

A month after they had succeeded in first absorbing thought-waves out of the air, they had completed a pair of miniature psycho-receivers modeled after the big set, with which they planned to carry out tests of range and selectivity. These were contained in small, flat wooden cases that fitted easily into their pocket. The energy supply was a batterylike, tiny cylinder of cellophane containing delicate coils of gossamer beryllium.

"It is simple," explained the professor at the doubt that was still in Bilte's face. "Suppose we are separated now by a distance of a hundred miles. I send my thoughts out. Your receiver picks them up instantaneously and amplifies them—"

"But *what* amplifies them?" insisted Bilte.

"Your own thought emanations!" the old scientist smiled. He was again a jump ahead of his assistant. "Your own psycho-waves, constantly contacting the receiver-coils in your pocket, induce a psycho-current which amplifies the far weaker waves coming from me. There is an analogy in radio transmission; very weak stations are sometimes caught up in the carrier wave of a powerful station and are thereby greatly amplified. The carrier wave of your psycho-waves will similarly pick up and strengthen my incoming emanations."

"But then I will be receiving both sets of thoughts—"

"Well, I hope," grinned the professor, "that you can distinguish your own thoughts from mine!"

Bilte grinned sheepishly in return. "Then as long as these test receivers are done, let's try them out."

"All right. You have a sister in Los Angeles, Fred, whom you haven't visited for some time?"

"Not for three years."

"Then take a trip down there, and we'll see if these psycho-phones, as we may call them, will give us an unbroken connection. Each hour during the day, on the hour, we will connect up and transmit to one another short sentences of any kind, which each of

us will record in writing at both ends. Then, on your return, we'll compare notes. Now pack up and go, but be back in two weeks."

CHAPTER II

Mass Psychology

BILTE returned from Los Angeles July 1, 1938. That date meant nothing in particular to the two experimenters, but to the world it was to mean that three weeks later would come the Great Change.

A comparison of notes indicated that their connection had been complete and perfect at all times. It struck a sort of wonder in their minds to think that two humans, separated by hundreds of miles, could converse freely with but a slight mental effort.

Radio was much the same, but required ponderous apparatus and much attention. With the psycho-phones, communication was magically simple.

Professor Thode was elated at the success in this first step toward applied telepathy, but Bilte noticed before he had been back long that the elderly scientist seemed pre-occupied. Even while comparing notes and commenting on the different phases of the experiment, the professor's attention wandered erratically.

"What is it professor?" asked Bilte finally, pushing the written pages aside.

Professor Thode started and then motioned for them to go into the laboratory. Striding to the set with which they had first received outside thought waves, he snapped the on-switch. He made no motion to alter the tuning.

Suddenly it came, a loud "voice"—yet it was not a voice as those other thought pickups had been. It seemed to be more of an emotion that had somehow been converted into a psycho-wave. No actual word-thoughts were distinguishable, yet the general meaning of the message became clearer as the amplified emanations continued to radiate from the set.

Bilte looked in amazement at the professor as he felt his heart pump faster and his muscles unconsciously tighten.

"Just what is it?" he asked, perplexed. "It isn't really a definite message. It seems more like a—an emotion! As if we had tuned in the incoherent thoughts of an enraged man!"

"Whatever it is," murmured the professor, "it comes in from at least a hundred different psycho-wave-lengths, like a chain station! And there's something ominous, threatening about it!"

They stared at each other silently for a moment.

"Just what do you think it means?" whispered Bilte.

Withholding an answer, the professor pointed to the panel board. A fine needle, delicately balanced on a sharp agate pivot, reposed there in a hollow formed by a group of beryllium coils.

"I've constructed a psycho-sensitive unit," explained the professor, "which will point to the source of any psycho-wave when connected to the big set. Watch."

As soon as the mysterious message began again to emanate from the set, the sensitized needle flicked back and forth in wide gyrations. When it gradually subsided it pointed out of the window across the blue of the Pacific.

"Which means," said the old scientist, "that the source of the radiation lies somewhere out in the Pacific—or across it, in Asia. With the power with which it comes in, supposing it to be at least a thousand miles away, the source must be a greatly energized one. Obviously, no single human mind could produce such a powerful thought-emanation without some sort of amplification."

"You mean," gasped Bilte, "that someone else has — has accomplished what we have and—"

PROFESSOR THODE nodded reluctantly.

"Either that, or it may be the combined mass radiation of a group of people." His eyes narrowed strangely. "Mass psychology directed toward one goal — almost mass hypnotism. This psycho-message that we receive so powerfully and on so many different

wave-lengths may be the fighting spirit of a nation, feeding and constantly renewing itself on military propaganda! You will notice that the needle pointed directly west—directly toward Japan!"

Then he stirred himself at Bilte's incredulous stare.

"Yes, far-fetched I know, Fred. Either of the two possibilities has me intrigued. I couldn't rest without knowing the true answer. Therefore, we'll track down the source of this super-powerful psycho-radiation!"

Aboard an ocean liner speeding toward Japan, the two experimenters became daily more excited as the needle never failed to point westward to the land of flowers and sloe-eyed people. It was a half day before docking that they made a final test. They watched the swinging needle come to a rigid halt.

The professor uttered a surprised exclamation and bent lower over the needle.

"Good Lord! It isn't pointing to Japan now, at least not to Japan proper. It lines up—" he hastily unfolded a map of the Japanese archipelago — "with the first of the Kurile Islands!"

He sat down weakly. "That then precludes my theory."

Bilte fidgeted uneasily.

"Well, if it isn't the mass mind-delusion of a great number of people, and since it can't be the emanation of one single mind, it must be a mechanically amplified psycho-radiation." He shuddered a bit. "The nearer we draw to the source, the more I feel a sort of involuntary animosity—a dissatisfaction with lots of things."

Professor Thode nodded.

"I feel it too—rolling waves beating at our subconscious minds, stirring our fighting blood, just like fanfares of martial music! Foreign correspondents have mentioned that strange feeling of restlessness and militarism, as though all the nation were bathed in the fiery breath of Mars, god of war; as in Central Europe in 1913 and 1914. The breath of Mars—"

The professor's voice suddenly hardened.

"Suppose a Japanese scientist stumbled on psycho-phenomena in his research, and progressed with it as far or farther than we, to the point where amplification of psycho-waves is possible. Suppose he decided to conceal his discovery from the world, and instead pervert it to evil use—to the purpose of stirring his people to conquest! That man could have set up to the north where our needle points, a powerful thought amplifier with which to accomplish that purpose!"

"Very possible," agreed Bilte gloomily. "But how could he—this hypothetical Machiavelli—control his emanations so that only the Japanese people were subject to their influence?"

"He wouldn't have to control them. The most direct and powerful of them would saturate Japan and the east coast of Asia, which is under Japanese dominance anyway. To the north and east and south, the radiations would go a long way before impinging upon large groups of other races. In fact, it may be those tailings of the original radiations that have so stirred Europe today, and placed it on the brink of another fearful internal war."

It was perhaps at this point that the two men began to realize that they had stumbled onto things of major importance.

"Fred," said the old scientist later, in a low fierce voice of determination, "regardless of the consequences, you and I are going to trace down this mysterious psycho-emanation!"

CHAPTER III

The Sphere in Space

THEY landed in Tokyo and immediately embarked again on a coastal steamer for Nemuro, on the island of Yeddo. Some seventy miles to the northeast was the first of the Kurile Islands, and the needle pointed rigidly in its direction. There was two days' delay at Nemuro before much argument and bribery convinced the Japanese port officials that the two American tourists were not spies.

In calm, clear weather, Professor Thode and his assistant, chauffeured by

a taciturn native, motored their way in a launch to the island at which their needle pointed like a damning finger of accusation.

By judicious use of a compass and their sense of direction, they were able to determine, three hours later, that they had reached the approximate point where the needle's line of extension intersected the coast. They landed at a stretch of weed-grown sandiness. Standing on the shore, Bilte hesitated.

"We are absolutely unarmed, professor, and we don't know what we are walking into—"

But the old scientist had already set the needle apparatus on the sand, and again closed the switch. The quivering needle swung in a lightning quarter circle and fastened rigidly to the northwest, without the least hesitant swinging back and forth as formerly.

The two men looked at each other significantly.

"It must be very close!" whispered Bilte hoarsely.

Professor Thode was already making his way toward a fringe of gnarled bushy growths further down the shore, beyond which nothing could be distinguished. Almost like a robot he strode along, and Bilte felt it would be better to check him before he ran into something unexpected. But as he was about to call, he saw from the corner of his eye that the pilot was tugging at the launch to shove off. To the unknowing pilot, the place seemed bewitched with ghostlike voices.

With a shout Bilte turned back, and pulled him away before he could get the nose of the launch off the sand. And when Bilte next turned around, the professor was nowhere in sight!

He stood a moment, undecided. Then he heaved at the launch with all his strength, pulling it as far up on the sand as he could. Thereupon, he left the beach, reasonably certain that the pilot, with his slighter strength, could not drag the launch clear by himself. At a trot, then, he made for the thickets and snapped on his pocket psychophone while he ran, hoping to contact the professor in that way. But it was a useless hope, as the very strength of the projector's emanations was sufficient to drown out any lesser psychowaves.

Reaching the thickets, Bilte crashed through the bushy growths, unmindful of clinging tendrils and barbs that scratched his skin. Soon he came out upon clear land that sloped gently upward for a hundred feet, and then abruptly veered off into a large depression. The professor was still nowhere to be seen, and a worried frown came to Bilte's forehead.

He ran forward toward the closer edge of the large depression ahead. When he had struggled up the short slope, the whole of the little valley suddenly swung into his line of vision, and he stopped frozen dumbfounded in utter amazement.

AT the exact center of the huge depression was an apparatus whose top did not rise above the general ground level. Set on a wide spreading tripod, it consisted of nothing more than a colossal metal globe whose one surface—that facing southwest toward Japan — was punctured by a flanged aperture, as though from it something was meant to pour.

Evidently that was the "projector" that he and the professor had suspected to exist on the island. But the other thing his eyes saw he was not to understand until later.

Back of the projector was another spherical globe of metal, but this did not seem to be a permanent part of the apparatus, since it was suspended off the ground a few feet. That in itself was astounding — a large spheroid of metal hanging in the air like a feather!

At the same time that Blite saw the projector and the suspended globe, he saw the professor, and a hoarse, choked cry burst from his throat. He had no time to shout again, or to rush to his assistance. The suspended spheroid quite suddenly leaped through the air, right over the cringing professor, who had evidently been examining the projector.

A hole yawned in its under-surface, and—Bilte gasped in disbelief—the professor, without any voluntary motion on his part, arose and catapulted into the hole, as though an invisible

giant's hand had yanked him off the ground.

Then the hole in the spheroid closed, and without a sound the amazing object levitated itself away from the ground, and gradually disappeared into the blue sky.

Bilte crouched at the depression's edge for a full minute, unable to collect his scattered senses. Then he staggered in a daze back to the stretch of beach. Scratched and bleeding, enervated by the shock of what he had seen, Bilte hardly noticed at first that the pilot was frantically tugging at the launch, and had almost succeeded in shoving it clear. Bilte broke into a stumbling run, shouting madly, and arrived just in time to climb into the boat with the pilot.

Hours later, Bilte awoke from a mental lethargy to notice the quays and docks of Nemuro rapidly approaching. Utterly deflated in spirit, he went directly to his dingy hotel room. All that afternoon and evening he paced to and fro, trying to think coherently. What had the spherical vessel been? Where was the professor now? What was to be his fate? What should he, Fred Bilte, do now? What *could* he do!

That same evening, dinnerless and sleepless, Bilte began to think he was going mad. He imagined he was hearing the professor calling his name. More than once he half turned, ready to swear the professor must be there. Suddenly he gasped, and with trembling fingers pulled out his pocket psycho-phone, cursing himself aloud for having completely forgotten that he had neglected such a direct means of communication.

IMMEDIATELY, at the snap of the switch, the professor's psycho-voice reverberated in Bilte's mind, calling his name over and over.

"Professor!" half shouted Bilte.

"Fred! Thank God you've finally closed our contact. I've been trying to connect with you for hours."

"Professor, are you safe? Where are you? What—"

"Fred, stop! Listen to me. There is no time to lose. I can't tell you much, because I haven't found out much. But you've got to get away from Japan and back to the States—back to our laboratory. I've been locked into a little room in this ship without seeing anybody, but I know it has been moving all the time, its speed constantly accelerating, and must be going somewhere. That somewhere must be the hideout or headquarters of these people who have made the projector. The one thing in our favor is that apparently they didn't know you were with me on that island. That means I can relay what I learn to you.

"But it will take the big set, back home, to do that if this ship goes much further. I will begin contacting you again in five days, whether or not you give me a return call. If I'm out of range of your psycho-phone, I will have no way of knowing whether you are listening or not, but it's all we can do. Oh, if only our big set could transmit as well as receive! Anyway, I'm going to see the finish of this and pass what I find out along to you. Now get out of Japan and hurry!"

Perhaps the two servants in Professor Thode's laboratory-home were surprised at Bilte's orders when he returned from their foreign trip. A couch was installed in the experiment room beside the big psycho-receiver, and meals were to be brought in regularly. He was to be left strictly alone at all times, and they were not to worry about Professor Thode—he had gone to China and would be back some time in the future.

CHAPTER IV

The Voice from the Ether

IT was during the evening of July 17, 1938, that Professor Thode's psycho-voice first came over the big set.

"Fred, are you listening?" it began. "God! How useless for me to ask a question whose answer I may never know! I have just found out several things, one of which makes it impossible for you ever to contact me with

the psycho-phone.

"Fred! I told you the ship was accelerating. That puzzled me, and probably you too. Only one type of ship would do that—a space ship. Well, I'm on a space ship!"

Bilte bit his tongue. Drops of blood fell unnoticed from his lips.

The psycho-voice went on:

"Yes, Fred, I'm on a space ship. Just an hour ago, the door of my prison opened and before me stood a creature—well, a creature. I will not attempt to describe him. You can believe me that I was thoroughly frightened and thought I was mad, especially when the creature spoke to me—in English—and addressed me as 'Earthman.' To make it short, he informed me that I was aboard a space ship bound for the planet Mars, and that he was a Martian. My skepticism must have shown itself in my face, for the creature then took me by the hand and led me up corridors and passageways in this amazing vessel and finally brought me before a window.

"And there it was—Earth, a green-grey ball hanging in space!

"You can't imagine the shock of it, Fred, nor the wonder and glory of it—seeing the heavens from a space ship. The amazing blackness of space, the steely stars, the impression of tremendous depth, the shuddering awe of its immensity. And then Earth—but a ball, a mote, hanging in the nothingness, its surface indistinct with a gauzy halo over it.

"I wonder how long I just stood there and stared! Finally I turned to my guide. He seemed amused by my awe.

" 'Earthman,' he said, 'does your mind reel at these things? I see it does. Naturally it would. I forget that the undeveloped intelligence of Earth has thought of space travel as remote and in the main improbable, if not actually impossible.'

" 'Sir,' I said, not knowing how else to address him, 'This is like a miracle!'

"The creature—or Martian, as I should say—laughed insolently and Fred, from that moment on I hated him! It would be hard to explain why. Perhaps if his acid laugh, and the peculiar tones of his voice rang in your ears, you too would promptly hate him—this creature. His whole demeanor was condescending and arrogant; oh, ten times more arrogant and contemptuous than the most conceited ruler of Rome could ever have been. He made me feel, during those few minutes we were together, that I was a crawling worm that had to get out of his path before being stepped upon.

"I am back in my little room—my prison—now. They have been feeding me regularly, a liquid food, very sweet but satisfying. The room I'm in has a higher air pressure than outside, and seems to be equipped especially for an Earthman. I wonder what that means?

"Of course, a thousand and one other speculations have been torturing me. What was this Martian, and his companions, doing on Earth? What is their connection with the projection of the psycho-wave that is inundating Japan with its insidious influence? Why am I being taken to Mars?

"God! At times I feel I have gone mad, or that this is a horrible nightmare. And yet this seems to be real—Fred, tell me, am I—"

THE incoming psycho-voice jumbled for a moment. Bilte crushed his knuckles against the hard bench top till the skin cracked. Then again came from the void:

"I shall have to remember I am a scientist, Fred, and as such must keep my wits. I've figured that I have been aboard now over six Earth days, and we can't be more than halfway, if that. I suppose you have already added a hexa-bank amplifier to the set. Probably you'll have to add another to be able to catch my waves when and if I arrive on Mars. Thank heaven psycho-waves have such a great penetrating power and—*oh!*"

Bilte started and turned paler at the agonized gasp that registered from the professor. Then his voice again, broken:

"Accelerating — tremendously — tons of weight—"

That was all and Bilte staggered to a chair, mopping a feverish brow. For

twenty-four hours there was utter silence from the psycho-ether tuned to Professor Thode's wave-length, and Bilte grew haggard in anxiety. In the early morning of July 19th, the suspense ended. Thereafter the professor radiated messages three separate times —a lost soul crying from a spatial wilderness. Only Fred Bilte was ever to know the full details of Professor Thode's three messages from the planet Mars.

July 19, 2 A. M.

The ship has landed on Mars, Fred. When I last contacted you a full day ago, our connection was broken when I was hurled against the wall by a terrific surge of the ship. Soon after I lost consciousness, and when I next opened my eyes, I could see through a window that we were no longer in space, but on a solid surface. In short, on Mars!

If I could somehow transmit to you psycho-television, perhaps you might then gain some idea of this Martian city that spreads before me. Imagine spires and towers a mile high; bulbous dwelling places suspended at any and all heights; majestic edifices that could house a hundred of Earth's ocean liners; columnar decorations glinting with inlaid jewels and burnished metals—all intertwined and connected with conduits and tunnels and such.

This is a city of Mars I'm in, Fred, and the *only* city!

I've found out many things. The duration of intelligent life on Mars goes back to a half million years ago. It was that long ago that the Martians had already invented speech and writing and the first beginnings of science. Their early history—when Earth was but a primeval jungle—is curiously parallel to our recorded history: a series of wars, famines, pestilences, revolutions, and mass migrations. They had seas then and continents and islands, just as on Earth.

It was a hundred thousand years after their first written records that spatial navigation became possible to their science, and the Martians swarmed all over the Solar System. No life was found on any of the outer planets, nor on their satellites, by reason of their remoteness from the life-giving sun. Mercury supported a hardy silicic form of unintelligent life. Venus and Earth were steamy pots of struggling evolutionary forms of life, and man was yet unborn on our world.

Thus the Martians were sole rulers and masters of the Solar System. For the next hundred thousand years the most precious and useful products of all the different planets were brought to Mars to further and make great Martian civilization.

BUT the next hundred thousand year period was a period of breaking down rather than building up. With the immense strides of their science, deadly and horrible weapons of destruction were developed, and the various classes and races fell on one another and waged war. These periodic wars gradually became more and more catastrophic and disastrous, and the once teeming and thriving population dwindled.

It is hard to believe, but my Martian mentor—his name is Sokon—intimated that for a long time the sole ambition, thought, and endeavor of all Mars was warfare and military dominion. First one race and then another gained ascendancy in endless cycles that might have gone on forever.

Truly, Fred, from what I've learned, this planet was rightfully, even if accidentally, named after the god of war—Mars!

But it could not go on indefinitely, because of the rapidity with which the population dwindled. About fifty thousand years ago all the planet lay wasted and war-torn and its denizens numbered but a few millions, scattered all over the planet in little, proud, isolated communities, each a deadly enemy of the other.

You can surmise, that while the long series of wars went on, scientific advancement was hampered and the peaceful trades fell almost to nothing. I am beginning to think, Fred, that warfare on Earth is a small thing compared to what it must be in such an advanced, superscientific world.

But just when it seemed that their civilization was doomed to suicide—

the few millions left would not feed their weapons more than another century—a salvation came to them.

That, Fred, is all I know of the story of Mars. For some strange—and I fear awful—reason, my mentor would tell me no more on the subject. How the unity of the warlike Martians was achieved I shall tell you when I find out.

Someone is coming into my room now, Fred! Goodby! You'll hear from me—if Providence wills it—as soon as I can manage it in secrecy, as I fear to transmit in the presence of Sokon.

July 20, 4 A. M.

I have finally got the chance to transmit to you again, Fred, but you will never know what torture I went through for a while before I could bring myself to contact you again. Perhaps it would be better that you should never hear this that I have learned in the past day here on Mars.

But I have made the decision to tell you all, Fred, and if it plunges your mind into a fog such as mine, God forgive me for the act!

Some hours ago Sokon took me to the roof of this giant building and into an airship. In this vehicle we darted over the immense mazes of this city to its outskirts. There the ship lowered to what must be the largest building on Mars. I estimate it at a mile square, yet it is not high.

Not a word did Sokon speak all this time. But after landing on the roof of this Cyclopean structure, he faced me with a strange and dreadful smile.

"Earthman," he said with a wicked sort of gloat in his voice, "now you shall find the answers to all your questions. Look around"—he waved an arm to include the conglomeration of strange apparatuses spread all over the roof near the landing field—"and know that from here is controlled the superficial destiny of Earth!"

OF Earth! *Of Earth!*

The searing thought rocketed through my brain and made me weak. What could he mean? I was soon to know.

The apparatus, I might explain, seemed to my wavering mind a hopeless maze of geared machinery all covered with some transparent protective material, from which protruded hundreds of long, thin spouts, or nozzles. Meaningless for the moment, but later they came to have a frightful significance.

Sokon then took me down an elevator, down into the building itself. I wish I could picture for you the scene that met my unbelieving eyes as the elevator door opened and I was led out upon a balcony from which could be viewed the entire interior, which was one immense room.

All around me was the gigantic columned interior. Evenly spaced across the floor were hundreds of rows of apparatuses something like organ consoles, in each of which sat a Martian.

Close scrutiny of one of the affairs just below me revealed it as a circular button board in the center of which sat the operator. As I watched, his long arm with its sensitive fingers flicked buttons with marvelous rapidity, causing little pilot lights to flash. About his head was a maze of wires and tubes connected to the control board by several strands of heavy wire.

But what use to describe to you something whose immensity and alien-quality you could never grasp, except that it relieves my fevered mind to tell of these common details. I will go on, as Sokon went on when I had recovered from astonishment and wonder.

Sokon returned to the previous day's talk and picked up the thread of the story he had left unfinished. The Martians, faced with self-inflicted extinction, decided at last that it was foolish to fight among themselves when they could satiate their battle lust in a way not at all harmful to their persons. Earth had been explored, and on its surface had been found a form of life with rational intelligence, inhabiting forests and caves—the Paleolithic Man.

A diabolical plan was conceived, and with a hue and a cry the Martians adopted it in boundless enthusiasm.

With their marvelous science, and their full and complete understanding of psycho-phenomena, they built psy-

cho-transmitters capable of projecting psycho-beams all the way to Earth, which would give the Martians practical control of the activity of mankind on the young world!

CHAPTER V

The Chessboard of Mars

I CAN see you now, Fred, trembling and pale, not daring to believe. And yet, it is God's truth!

These control boards, at each of which sits a Martian like a gloating tyrant, are psycho-transmitters which project to Earth, at the will of the operator, any sort of psycho-emotion or actual direct thought. You will understand that the Martians have refined and improved their apparatus beyond our understanding, so that they can either fasten like a leech to one certain mind of Earth, or to a group, or to a whole nation, and pour their insidious psycho-emotions forth like a foul wave of slime.

And the sole purpose and aim of each Martian is to wreak as much bloodshed and harm as he can on Earth!

So all through the ages, while aboriginal man gradually arose from ignorance and darkness to the glimmerings of intelligence, the Martians have been holding mankind back, instigating wars, tribal battles, personal fights, and internecine revolutions, satisfying their bloodthirsty, warlike natures in playing warlord to Earth! Like an evil entity in the heavens, the Martians have been strewing the pages of Earth history with blood and gore and hatred and discontent.

It has always been the wonder and surprise of most intelligent people of our time, Fred, why mankind had wars at all, why there was constant bickering and battling when things could be settled so easily in more peaceful ways. "The beast in us" it was called, but actually it was the beast being put into us! And God only knows how far ahead the world might be on the road to true civilization if it weren't in the fatal, bloody grip of Mars.

All through the ages, then, our superficial destiny has been guided from Mars by beings who, not willing to battle themselves, have instead caused battles and bloodshed on another world. Sokon tediously traced Earth history for me, with which, naturally, all Martians are smugly familiar, and showed me all the innumerable incidents which we thought to be the course of fate and which were really the results of the Martians' psycho-waves—a vicarious means of satiating their lust for battle.

Just to give a few instances. Alexander the Great, world conquerer, was started on his bloody career by a Martian psycho-beam that from babyhood on stirred his fighting and ruling nature. The psycho-emotion goaded him and tormented him till he had to obey its call, and partly under its guidance, and partly due to the conditions under which he lived, he swept out from Macedonia and poured blood on dozens of battlefields. Alexander's whole army was constantly under the influence of a psycho-beam from Mars which made them so vicious and fighting mad that they swept all before them, including the Persian hosts of Darius.

Then Attila the Hun. His invasions were first conceived in a Martian brain and then forced on him so that he became one of the bloodiest and most vicious scourges in Earth's history. His little slant-eyed troops were bathed in a psycho-beam so powerful that some of the worst atrocities of all time were the result.

THEN Napoleon, the little corporal who as a youth dreamed of a great France. His dreams were not his own —they came hurtling across millions of miles of space and were implanted in his sensitive and keen mind. He arose, lashed by the hammering psycho-beams, and swept all Europe, wallowing in blood, sacrificing human lives in absolute indifference. Yet it was not Napoleon himself who cared so little for human life and suffering. It was the Martian across space who chuckled in glee when vast armies swept together and decimated one another.

Then, in the modern world that we know—the fearful carnage of the World War when mankind had advanced enough scientifically to produce terrible weapons that reminded the Martians of their own disbarred ones. In telling of this last Earth war, let me mention again the building and its psycho-controlboards.

The boards are divided among all the different nations that were formerly represented on Mars before their union. Each group, still as proud and hateful as of yore when they battled with guns instead of psycho-waves, concentrates itself on a certain warlike project on Earth. For instance, for the World War, the Martians decided to make it a grand and glorious game between two and only two sides.

Accordingly, half the boards were then relegated to control the Allies, and the other half the Central Powers.

I will never be able to erase from my mind, Fred, the unutterable look of evil glee on Sokon's face as he told me that never in all their fifty thousand years of playing had the Martians had so much "fun" as during the World War! It had been a grand game and had occasioned intense rivalry, and they had been sorry when it had finally ended!

Think of it, Fred! All Earth, every section and corner of it, constantly under the evil influence which darts from Mars at instantaneous velocity and submerges it in psycho-waves which have as much to do with the destiny of Earth's peoples as their own hampered efforts to rise above brutality and bloodshed and suffering!

The chief occupation of the Martians in the past ages of their civilization had been warfare. Now their chief occupation is playing on this gigantic chessboard of Mars, moving humans in paths of fate like the chess player moves his pawns and pieces!

And, Fred, the Martians had so much enjoyment out of the last World War, that they have again decided to play such a two-sided game. Japan is to be the nucleus of one warrior group, and Russia the nucleus of the other. They plan, so Sokon tells me, to draw into this war all the nations of Earth in a grand melée which they intend to make a dozen times more horrible than the last holocaust!

Furthermore, Sokon informed me that the projector set up on that Kurile island, which we first thought to be the work of an Earth madman, is part of a secret plot of his to beat the other side. One of the "rules" of the game is that neither side shall set up concentration projectors on Earth itself, as this would give too much of an advantage to incite Earth all at once and destroy it completely. Sokon and several of his arch-plotters secretly went to Earth a year ago and set up the projector. This will incite the Japanese much faster than the enemy and cause them to arm more quickly and fight more viciously.

THIS reveals to me the true decadence and evil of the Martian nature in general. Whatever was the initial cause, the Martians grew up with a far greater heritage of warlikeness than—I am sure—ever reposed in Earth-people's basically gentle natures.

God, Fred! How long will my mind remain coherent when every second the thought beats a frenzied rhythm of hopelessness that Earth will never be free of the bloody Martian clutch till some far distant future when the two worlds may battle for supremacy.

If only there is something I could do! If only there is some way I could destroy them!

Good-by, Fred! Perhaps good-by for good. Sokon is waiting for my reeling mind to break down. He does this now and then with Earthmen, delighting to watch them fall to pieces when knowing the truth. If there is anything more I might want to transmit, wait for me a full Earth day. If I do not call by then, you will know that I am dead.

In a silence that seemed to echo with the satanic leers of other-world demons, Fred Bilte moved about the laboratory with a sort of aimless purpose. He rummaged in the cabinet, taking from it papers covered with scrawled formulae. Hours later he took the sizeable batch he had collected and burned them wholesale on the tile floor, opening a window to let the acrid smoke out. He

stared until the last flame went out. The secret of psycho-detection would not leave the laboratory.

Then he went to his couch. His eyes glinting with a bleakness like that of frigid space itself, he stretched himself out stiffly. His face was like a graven wax mask. He waited, not caring to sleep. He refused entrance to the manservant with a tray of food, and in the early hours of July 21st the professor's voice came again:

Fred! Fred! Are you there? Pray God you are. He had not tortured me enough, Sokon, so he again dragged me to the chessboard of human life not many hours after the first time, and went into vivid detail more horrible than I dare to relate to you, Fred.

Suddenly an enormous thought struck me. A mad thought. Yet it may have been a sublime thought. I will soon know.

Sokon, whom I will curse in my dying breath above all other Martians as the master fiend of them all, took me into the section whose psycho-boards are on the enemy side—Russia's side, you know, in this titanic Earth war they are instigating. One of that side's members threw a taunt to Sokon, which he returned with interest. The taunting grew and became a quarrel between the two Martians.

I merely stood by, seeing a plain example before my eyes of how warlike and hot-headed Martians are when even in their game they will come to blows.

It was then the thought struck me. I obeyed my sudden inclination to carry it through and dashed away from the two bickering Martians, and ran further into the section whose members are opposed to Sokon in the war game they are playing

I BETRAYED Sokon at the top of my voice and told his opponents of the illegal projector which had been set up on Earth. Head after head stirred from the boards and jerked up. Dozens of pairs of eyes within range of my voice heard and grew wrathful.

Then Sokon came bearing down on me, having heard a little and surmised the rest. He fastened his baleful, speckled eyes on me, and my voice died in my throat. I made a brief prayer and waited for death.

But it did not come! No, it did not come, Fred!

I opened my eyes a moment later to find a dozen Martians, all enemies to Sokon, protecting me from him. Furthermore, they were demanding something from him and I could easily guess what.

I know little or nothing of just what was done then. I was led by the hand to a little cupola of transparent material which overhangs the entire interior of the building. In it are strange instruments that I can guess are deadly weapons. This cupola, I surmise, is a sort of policing center to insure peace in the assembly. The guns are on pivots and can rake any part of the building.

I am here in that cupola above the chessboards now, Fred. I have not been fed for several hours. My throat is parched and dry. I am numb from mental agony. Yet a faint spark of hope has been born within me. Not hope for myself, no. What does my single life mean? But hope for Earth! Perhaps the investigation will result in removal of the projector on Earth.

That there is an investigation in progress, I know. One of the fellows up here in the cupola—there are dozens of them, equally divided in allegiance—casually told me that as soon as the right part of Earth's surface turns in the direction of Mars, their powerful telescopes will examine the Kurile Islands for that outlawed projector. I asked what would be the result when it was found. He made a shrugging gesture, but I noticed that his hand unconsciously caressed the gun near him.

There is nothing more to say, Fred, except that there is unrest in the very atmosphere around here. I can almost feel the hatred and suspicion welling up between the two sides. What the outcome of my action in betraying Sokon will be, I don't know. But almost all my suffering at that devil's hands is repaid at the thought that at least I've put him in a troublesome predicament.

The voice ceased. Later it burst forth again, trembling with excitement:

A message, Fred! A message corroborating my story — the telescopes saw the projector! Also they saw something more— a space ship landing beside it and blowing it to drifting dust. Sokon had sent a space ship post haste to Earth to destroy the incriminating evidence of his treachery, but too late!

I hardly know what to say about things here now. Excitement is running high. Many Martians have left their boards and are gathering in little groups. There is much shouting back and forth. The very air is electrified with wrath and hatred. Sokon is down there conferring with his henchmen. His opponents are glaring angrily in his direction, for he has been a leader of the other side.

THE fellows up in this gun-cage are very nervous and fidgety. They have in their hands the power, probably to wipe out all below them. The sympathizers of Sokon in the cupola are sitting at their guns. The others are watching the scene below. They should be—

Something's beginning now!

A group from Sokon's opposition is running at him, shouting. Sokon faces about in fear—it is the beginning of a mob riot! They near him . . . several Martians tumble in the rush . . . God! . . . Sokon gunners just shot down a livid bolt of something that whiffed a dozen Martians to dust! Now the opposing gunners retaliate with a bolt to the other side!

It is a battle royal now!

Without restraint the gunners are shooting down rioting Martians! Hundreds have been converted to puffs of vapor. Good! Good! This in a small measure repays Earth for the sacrifice of her murdered people. This thing is getting bigger and bigger . . . perhaps it will become . . .

Yes! Part of the roof has been disintegrated. At its edges appear Martians from the city with weapons that they rapidly install like machine-guns . . . the disintegrating bolts are becoming thick . . . the battling and rioting is turning into an actual war. I can see centuries of repression swelling into a terrific bloodlust.

I see a giant airship . . . it hovers above the roof . . . the roof puffs away . . . a searing ray springs from the ship . . . it is sweeping in circles and in its path nothing remains . . . death for the Martians . . . my heart sings!

The gunners here are busy wiping out their fellowmen in absolute war-madness. It is awful, that look in their eyes! . . . Now is my chance. I am stealing over to the giant chessboard psycho-transmitter. A few twists of several different levers, and I am ready to start.

I'm wiping out the entire bloody planet, Fred . . . I'm concentrating on the thought that every Martian kill his neighbor, kill himself . . . Never before have the psycho-waves been used at such short range . . . The psycho-transmitter is now focused to envelop all Mars with its waves of hate . . . I'm not leaving this machine until I have destroyed every Martian, one by one . . .

WHAT IS YOUR SCIENCE KNOWLEDGE?

Test Yourself by This Questionnaire

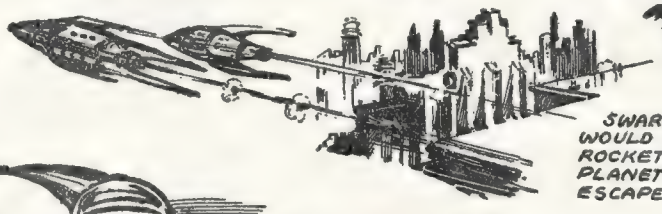
1—How many electrons are there in a potassium atom?
2—What is Polyphemus, in the astronomical sense?
3—What is the lightest element?
4—What is the Douglas-Hunt process of precipitation?
5—Name five different rays known to science.
6—Will a perfect vacuum carry an electrical discharge?
7—What insect can travel better than eight hundred miles an hour?
8—What is chlorophyl, and how is it used by plants?
9—How do single-celled organisms multiply?

(A Guide to the Answers Will Be Found on Page 121)

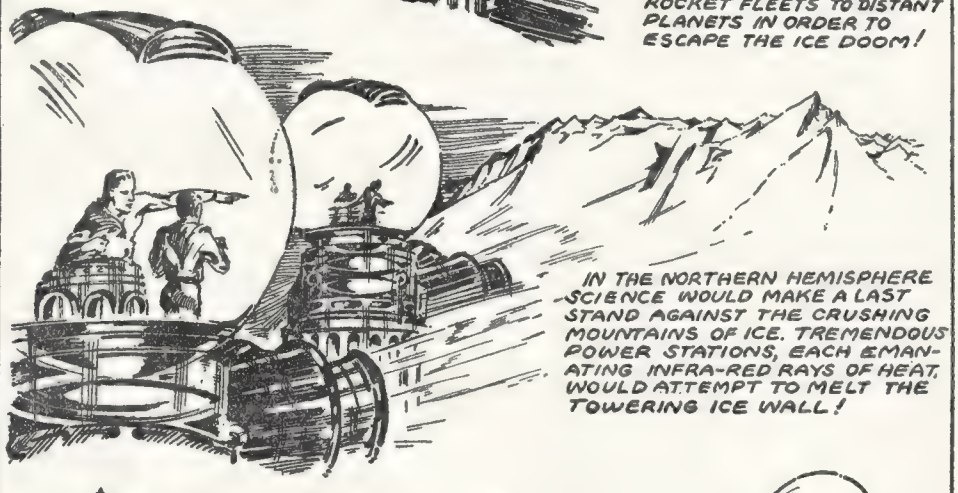
BY JACK BINDER

IF— ANOTHER ICE AGE GRIPS THE EARTH!

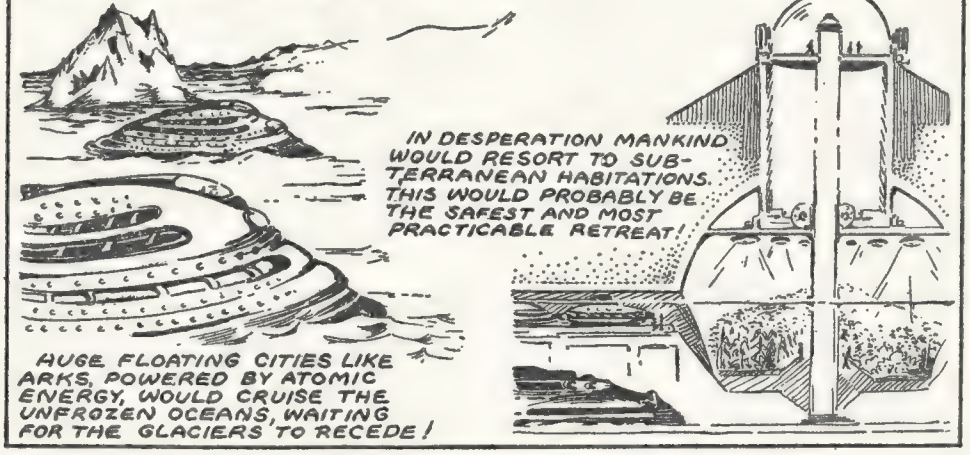
UNABLE TO WITHSTAND THE SUPER-POWERFUL THRUST OF THE ONCOMING GLACIERS, MANKIND'S GREAT SKYSCRAPERS WOULD CRUMBLE BEFORE THE IRRESISTIBLE JUGGERNAUT. IT IS LIKELY THAT NOT ONE OF THE WORLD'S TWENTY-FIVE GREATEST CITIES WOULD SURVIVE THIS HOLOCAUST!



SWARMS OF HUMANITY WOULD MIGRATE IN GIANT ROCKET FLEETS TO DISTANT PLANETS IN ORDER TO ESCAPE THE ICE DOOM!



IN THE NORTHERN HEMISPHERE SCIENCE WOULD MAKE A LAST STAND AGAINST THE CRUSHING MOUNTAINS OF ICE. TREMENDOUS POWER STATIONS, EACH EMANATING INFRA-RED RAYS OF HEAT, WOULD ATTEMPT TO MELT THE TOWERING ICE WALL!



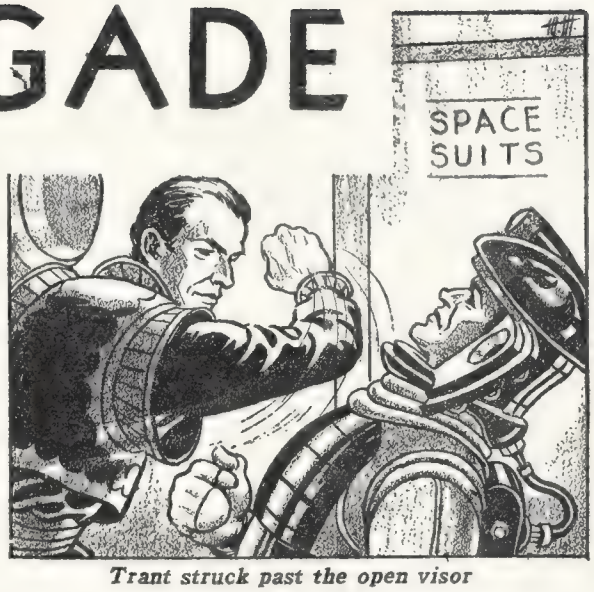
IN DESPERATION MANKIND WOULD RESORT TO SUB-TERRANEAN HABITATIONS. THIS WOULD PROBABLY BE THE SAFEST AND MOST PRACTICABLE RETREAT!

HUGE FLOATING CITIES LIKE ARKS, POWERED BY ATOMIC ENERGY, WOULD CRUISE THE UNFROZEN OCEANS, WAITING FOR THE GLACIERS TO RECEDE!

Next Issue: IF ATOMIC POWER WERE HARNESSED!

RENEGADE

The Ways of the Ether are Strange When a Spaceman Seeks to Betray



Trant struck past the open visor

By J. HARVEY HAGGARD

Author of "Faster Than Light," "Human Machines," etc.

THE lower corridors of the *V. S. Pelledaria* were empty. Ellord Trant became aware of this fact by cautiously peering down the rampway from the low-deck quarters, and he chuckled to himself. He had just heard the chief purser muttering perplexedly:

"I can't understand it, at all. We came down over the trap-doors of the Arachnidas here on the 42XY Planetoid, and our Y-beams failed. They've built a barrier down there, from a knowledge of our weapons that could only have leaked from our own ranks, but I hate to think of a terrestrial as a —a renegade."

Renegade! What would the purser have thought if he could have known that his assistant, Ellord Trant, was the renegade of whom he had spoken!

For four Earth hours the *V. S. Pelledaria* had rested on that invisible barrier, a bare two hundred feet above the rocky asteroid. Men dared not go down on the barren surface, where trap-doors would swing up from the seemingly unbroken expanse, leaving them helpless before the barbarous, chitin-garbed Arachnidas, whose nightmare fighting fangs and talons would tear into the flesh of defenseless Earthmen whose ray dissemblers had been rendered useless.

Renegade! But they could not know of those Core Dwellers within the asteroid, whom the Arachnida warriors served, or of the amaranth eyes of Her, fairest of the Core Dwellers. Ellord Trant chuckled again as he thought of her, and scanned the low-deck. He would not go unrewarded if this merchant vessel of space was delivered as a prize to the Core Dwellers, as others had been in similar coups. That message over the ether-phones to his captain had seemed simple enough, an emergency call from desperate captives on a satellite world. There was no possibility that anyone would suspect a trap.

Those bubble-capped trap nests of the natives had retained all of the appearance of innocence, until the first barrage from ambush had melted the outer gravity sheaths white hot, and then ran dripping down the hull. From that moment the *V. S. Pelledaria* had rested on an invisible barrier, unable to loose the pent-up energies that sought to drive downward at the rugged surface.

From where Trant stood, he could see disc spaceports, beyond whose transparency were auras of noxious purple, a protonic emanation that clung to the scarred hull of the old space-dog ship like a battered armor. Occasionally he saw brilliant crimson flashes as the rays flashed upward from the entrenched warriors of Planetoid 42XY.

HE was in luck. Perhaps it wasn't so strange that the low-deck was empty. Up in the midmain, the gunners were manning the Y-beams that circled the *V. S. Pelledaria's* hull, hoping against hope that the barrier would vanish and the destructive energies be loosed again. There were no men to spare.

Ellord Trant made his way to the space toggings compartment, and suddenly cursed. It was locked securely. A metallic footfall obtruded in the quiet, ringing from the rampway. He looked up then, for another figure was coming down, and his eyes narrowed as he saw that the newcomer was clad in space-suiting. Now the other was so close that he could feel the vibration of heavily shod feet clumping on the berylumin floor.

"Ellord Trant! What are—" came startled, questioning words from the helmet.

"Curtiss!" He saw quick suspicion twinge across bland, whitened features. The words stopped then, for Trant's clenched fist had ripped across the intervening space. Curtiss seemed paralyzed with surprise. Trant had struck quickly, his fist passing the opened visor and thumping a telling blow against the bared chin. The man in the space suit flailed out awkwardly, unable to escape the swift succession of blows rained on his unprotected face by his more agile adversary.

Presently he slumped to the floor, unconscious, and Ellord Trant breathed heavily as he stripped the body and donned the space suiting. Turning oxygen from the shoulder compressors into the helmet, he breathed deeply, crept to an airlock, and stared through the sheathed glassite scanner at one side.

Trant's pulse was throbbing; for a moment he wondered if his jaded emotions were entertaining some small sympathy for these terrestrials he had betrayed. It had been an accident that he, of all Earthmen, had seen the faces of the Core Dwellers, and continued to live, despite the ferocious Arachnidas that lay embedded in trap-embankments over the entire surface sphere of Planetoid 42XY, emerging merely to prey upon and ravage the smaller of passing space vessels that were lured to their rocky world.

Yet it seemed a long time since that day he had first shared the confidences of Her. His searing glance razed space; he saw the lower bulging surface of the space ship hovering over the grey planetoid and glimpsed futile rays flashing harmlessly down at the blistery embankments of the garrisoned Arachnidas.

Queer, this dazed sensation that swept over him; he could remember his entire life, not distinctly, but vaguely, and the battered face of the man he had just overpowered kept creeping into his consciousness. Then he was cursing, shouting, coughing against the transparent cowling of his helmet, for he had seen a reflection of a man crawling close to the floor, and the bruised face was that of Curtiss. He wheeled, but found the compartment empty.

"Ellord Trant!" whispered the space-phones in his toggings accusingly. "You are the renegade. We didn't know."

ELLORD leaped forward swiftly, for that ionic communication had seemed to have emanated from other head-sets than his own. He was reasonably certain that Curtiss could not have recovered in this short length of time. His body was tingling numbly; he wondered all at once if he had heard anything at all. If it hadn't all been just his conscience. He was quite alone. Even his shouts had aroused none of the crew that usually loitered about low-deck.

No time to lose now. Trant turned and whirled the tumblers of the airlock. His pulse jerked like a triphammer. Every pore of his body was exuding perspiration. He stood in the cubicle and let the inner door fasten. In the momentary darkness a hysterical elation seized upon him. He recalled every delineation of Her, as she would be in the subterranean sanctuary, waiting.

Oddly enough he could not feel

triumph over the cul-de-sac into which he had betrayed the terrestrial ship. That counterfeit ether message had played upon their softer sentiments, had taken advantage of the fact that they were—Earthmen.

A bare two hundred feet of vacuum, empty beneath the undiffused yellow sun of space, separated the *V. S. Pelledaria* from the corrugated terrain. With the gravity-belt, Trant could make the intervening distance in a clean-driving dive, decelerating his speed near the surface to alight softly on his feet near one of the apertures beyond which lay safety. Then the Arachnidas would ascend and pillage the helpless vessel.

He stood in the orifice now. His breath came fast as he prepared to leap. His gauntlet rasped against the metal hull, and he felt the air in the lock cubicle rush past into the vacuum. The sound that rattled from his mouth was not pleasant to hear. He thought fleetingly of Curtiss again, and kicked out as he fell downward.

For a moment he plummeted headlong; his universe was clouded with a strange settling pallor, like the tawny down of Her lustrous hair. A million stars enveloped it; something wrenched at every fiber of his being. He was enveloped in a flaming conflagration that materialized almost too suddenly to register the pain that tore deeply.

High up in the bridge tower of the space ship, Captain Kurdley stood nervously over his visor screen.

"I had the low-deck cleared, except for Curtiss," he said. "It's in a dangerous area. We tested the static charge of the asteroid three hours ago, and have been building up an opposite charge ever since. If it wasn't for the vacuum it would tear across the barrier, destroy it. Yet a perfect vacuum will not carry an electrical discharge."

"Perhaps something is wrong," suggested an under officer, staring at a space chronometer. "Two minutes have passed since Curtiss went below. The gunners are ready to man the Y-beams if he succeeds."

For some time the photon rotors had been trying to do the impossible, to generate a spark of searing electricity that would span the two hundred foot void below. Captain Kurdley's chin was trembling. Muscles knotted in his cheeks as he leaned uncertainly against a control stanchion. He hated to see a man go willingly to sure death, even though the sacrifice would not be in vain.

A THUNDEROUS concussion rang through the vessel from stem to stern. Through the prow visors they saw the space-togged man dive downward, saw the blinding flash of unleashed electrical fury that leaped out and followed. At the same time, the *V. S. Pelledaria* lurched aside, unguided but freed of its shackles. From the midmain came the exultant shouting of the crew.

Captain Kurdley frowned to hide his emotion.

"Someone had to leave a path of tenuous air, mushrooming in his wake from an airlock, to enable the discharge to leap across the vacuum. It worked. Now let them attack. Poor Curtiss!"

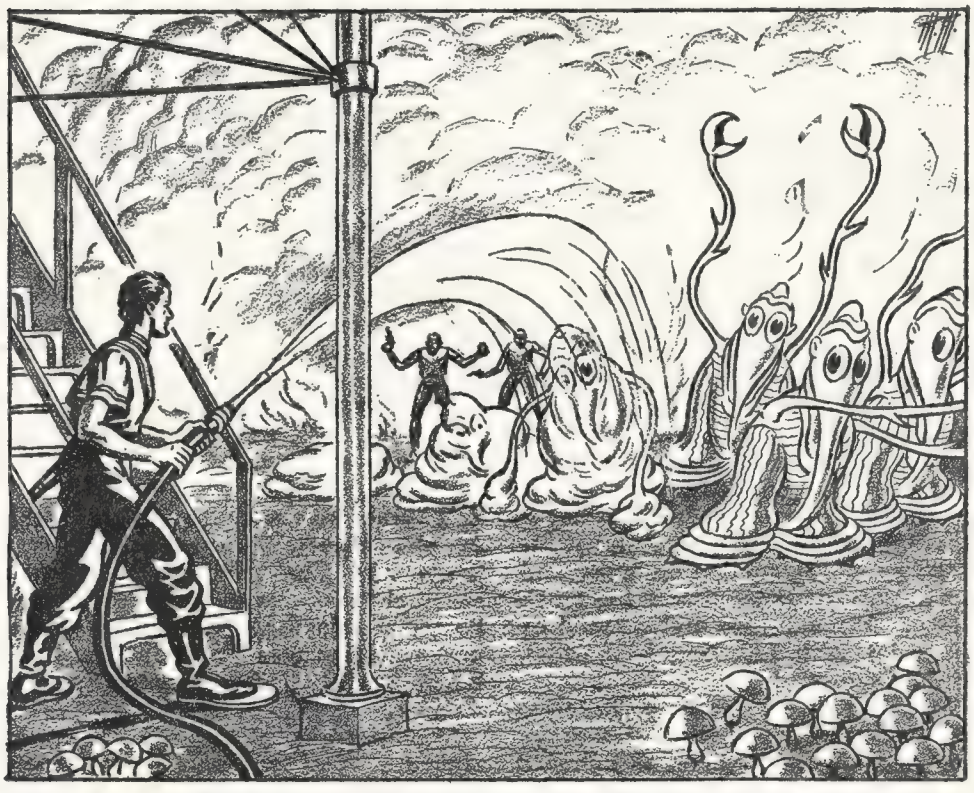
CONQUEST OF LIFE

A Powerful Novelette of Laboratory Magic

By EANDO BINDER

—in the Next Issue

GREEN HELL



Frampton sprayed the greenies with a chloride solution.

The Planet Venus Is the Fester Spot of the Solar System—and No Wonder, with Its Strange Chloro-men and the Whizzing Flies!

By ARTHUR K. BARNES

Author of "The Emotion Solution," etc.

THE compact metal-walled house rose on its four spindly legs, twenty feet above the spongy earth. Around it, swirling sluggishly, clung the eternal Venusian mist, dank and hot and miasmatic.

A figure resolved slowly from the fog before the house, a young man dressed in the thin rubberized garments of the Venus colonials, the broad-soled boots that enabled men to traverse the many dangerous spots of steaming marshland. The young man stared keenly at the house, then withdrew a few yards into the all-enveloping obscurity.

From the rotting bole of a fallen giant cycad he drew a tiny portable broadcaster, designed to operate on a tight beam. The diminutive microphone was equipped with a "scrambler" which made low voice tones high, and high tones low, thus precluding

any danger of interception of a message except by someone equipped with an "unscrambler."

The man spent perhaps five minutes calling and delivering a brief message, after which he returned the equipment to its hiding place.

Once again he came into view in the little clearing before the house. Panting heavily, he climbed up the steps to the narrow, encircling porch, then paused to wipe the sweat from his forehead and take a last look around. It was young Ben Frampton.

"God, what a hole!" he muttered aloud.

He had left the sweet, cool Earth scarcely two months ago, and had experienced only a half dozen or so of Venus' week-long, dragging days and endless, bitterly cold nights. Already he was heartily sick of the place. Despite the temperature-regulating layer of carbon dioxide in Venus' upper atmosphere, the strangling humidity and man-killing heat was almost too much to bear. The sub-zero nights could be combatted with furs and heat units, but the heat—God!

Nor was that all. Frampton despised the ever-present, sickly grey-green mists that throttled vision and choked the lungs. He never wanted to see again the scanty vegetation, the tall, lonely trees shooting high through the fog desperately striving to reach the sun, broad-bladed leaves spread wide to catch ever faintest seepage of the rare rays of sunlight. He was nauseated by the innumerable corpse-white fungi that sprang up every day from the damp ground, with their puff-balls popping incessantly to cast their spores about and propagate their nasty breed the more.

He hated the devilish work that went on in that strange place. And most of all he had a deep-seated abhorrence for the company whose name was printed in chromium over the door of the station—*Interplanetary Enterprises, Inc., Station No. 9.* That was what made the planet such a fester-spot in the System. Well, it wouldn't be for long, Frampton thought grimly.

He went in and slammed the door. Quickly he stripped to the waist and reveled in the dry coolness of the mildly refrigerated interior. The sound of measured footsteps came from one of the two tiny bedrooms.

"Old-timer," Frampton called. "I'm back again. Good news." He paused to sniff at the lingering odor of disinfectant in the air. "Did you have a chem-spray while I was gone?"

"Old-timer" Ellerbee, station manager, entered the living room. He was old, with a seamed and weatherbeaten face and mild blue eyes that always seemed to be seeing distant places and things. The upper half of his body was badly scarred, relics of a thousand battles and adventures in the wild frontiers of the System. He nodded.

"Yep. No use making you sit and hold your nose, too. So I cleaned up while you were out."

IT was necessary to disinfect the place thoroughly every seventy-two hours, else Earthmen would quickly succumb to the strange and malignant bacterial infections that swarmed the hothouse that was Venus, and against which Earthly bodies have built up no defense.

"Compound's full again." Frampton sighed. "Ten greenies. Natives brought in the last one while I was down there. I suppose we'd better call for a freighter."

"No hurry," said Ellerbee presently, his old voice calm and unmoved. "Guess I'll run down and look the new arrivals over. Feel like going out again with me? No need to if you're tired."

Frampton opened one of the misted windows, cleared it with one sweep of his hand, and closed it again, staring out upon the dead face of the fog. Monotony. It would have driven men much stronger than Frampton crazy in no time.

But old Ellerbee seemed made of phlegm and whipcord. Somehow he managed to stick it out; he had been here four years now. Frampton looked at his superior for the hundredth time and found no answer to the riddle.

"I'll go with you," he agreed. "Need the exercise." He started to dress again, then turned impulsively to the older man. "Say, Old-timer. I've never

asked you this. But why are you out here in this hell-hole? You ought to be back on Earth, taking it easy, living in comfort, having—" He broke off in embarrassment at having broken an unwritten law. "None o' my damn' business, I know. If I'm being nosey, just tell me to shut up."

Ellerbee smiled slowly.

"No, I don't mind telling you. Do me good to get it off my chest, maybe—" He spoke evenly, quietly. "It was just a bad break, I guess. I was with the Interplanetary Patrol. For twenty-three years I served, in the ranks and in command. I captained a space cruiser, a fighting ship. For years I had the power of life and death over my crew, and I never misused it. We built up a reputation as a scrapping outfit. Not a failure on our record. Then when I was due for retirement and a pension, I made a couple of mistakes. So here I am grounded, on this stinking planet, engaged in the filthiest traffic in the universe." Ellerbee's voice held no rancor, no animosity. It was almost as if the man's spirit were broken.

Frampton understood in a dim way. Habitual salute, absolute power, is a strange thing; it can color and warp a man's whole life. The gesture is one fraught with meaning—respect, admiration, recognition of superior ability, authority. The captain of a space ship is the king of a tiny world, an absolute monarch.

In his ability to handle the incalculable energies at his command, and defeat time and space itself in his dash through the very stars, he is a minor deity, a god. For such a one to be shorn of his glory with a single stroke of the pen is very near to murder. Frampton nodded.

Ellerbee's voice droned on.

"Even as a captain the pay in the Patrol isn't high. I had but little saved. It seemed the only thing to do was to risk everything to make a small stake in the few working years I had left. This was my choice." He shrugged.

Frampton understood this more clearly. For the shipment of greenies now gathered in the compound outside, Ellerbee would receive about ten thousand American dollars. Frampton himself would collect about a thousand. And the Company would make about a hundred thousand, he thought bitterly.

"But think of the risks you're taking. The climate, the physical dangers of the planet here. And suppose you get caught by the police. You'd spend the rest of your life rotting in prison or exiled to a living death in the mines of Mercury. Old-timer, why don't you get out of here? Now!" He'd become quite fond of the old renegade. He even felt he'd confide in him fully except for the old man's creed of unswerving loyalty to his employer, no matter whom it might be.

ELLERBY smiled faintly, philosophically.

"Shall we go?"

Frampton led the way out, pausing to shut the door tightly behind them. As he started to cross the porch, there came a sudden shrill whine and a simultaneous clang of metal. Frampton flinched automatically, then grinned sheepishly.

"One o' those dangers I mentioned a minute ago," he said. "I never can remember that those damn' whiz-bangs are already past by the time we hear the whine."

He stooped to pick up a tiny, heavily-armored, beetlelike insect where it lay squirming on the porch after hurtling into the metal wall of the house. "Hard to believe these things can go seven hundred and fifty miles an hour. Faster than the speed of sound." The insect was about the size of the point of a fountain pen, and its armor was sufficiently sturdy to protect it from most natural hazards to be encountered on its speedy travels. It could puncture dangerously a man's flesh, or slice a nasty gash.

Ellerbee was already halfway down the stairs.

"There's a fly back in South America that leaves these whiz-bangs standing still. Supposed to go better than eight hundred miles an hour."*

Frampton didn't bother to answer. Talking at length in the steamy atmosphere left a man gasping. Instead, he

* The deer-bot fly.

followed the older man along the path, which was lined at intervals with phosphorus-tipped metal markers. Presently the compound loomed mysteriously from the grey opaqueness, taking shape as a simple corral of electrically-charged wires in the form of a rough square. In it, sitting or standing motionless and silent, were ten of the strangest of all creatures to be found on any of the known planets of the universe.

These were the chloro-men of Venus.

Through some unfathomable quirk of nature, this nearly extinct species represented a curious link between plant and animal worlds. Averaging about five feet in height, they were only semi-vertebrate in structure, having tough cables of cartilage supporting their bodies instead of bones. Their skin was a porous, bark-like substance, at once flexible and unbelievably tough. About seventy per cent of their "blood stream" was a compound almost identical with chlorophyl, the element which enables plants to absorb the energy of the sunlight and use it for conversion of carbon dioxide into starches and proteins.

The presence of this chlorophyl in their veins gave the chloro-men a greenish tinge—hence the colloquial reference to them as "greenies." They had eyes and rudimentary ears, but neither mouth nor nose, since they ate and breathed like plants, through their "skin."

For locomotion, they depended on a sort of flowing pseudopodal motion of the under parts; though they had arms, there were no true legs. They moved but seldom, and always slowly.

Since the upkeep of these strange creatures was almost nothing, only CO_2 and a few minerals being necessary, and as they were very enduring and could work for great lengths of time without fatigue, they were highly prized by wealthy Tellurian and Martian landowners as slaves. But laws had been passed, forbidding capture or sale of the chloro-men.

They were declared contraband, and violators of the anti-slavery laws were liable to severe punishment. However, once on Earth, the excessive sunlight so stepped up the metabolism of the greenies that their normal life span of two or three hundred years was radically shortened. So the demand exceeded the supply, and the price went up, and smugglers with daring and cunning made fortunes by slipping through the blockade with their illegal cargo.*

"Poor devils," said Frampton bitterly, as the two men looked over the shipment. Their soft eyes staring appealingly in bewilderment always stirred the young man's pity. "This is a rotten business, Old-timer."

SLINKING around the outskirts of the clearing were half a dozen of the scaly man-things native to the planet, awaiting their payment with candy and cheap, loud-ticking clocks and gewgaws. They represented the only source of supply for the slavers; an Earthman would hardly know where to look for the curious chloro-men, and the terrific climate wouldn't allow him to penetrate the unexplored wilderness very far.

Ellerbee nodded equably.

"Sure. It's rotten. So what? I've got no choice, son. A man must live. And besides, I don't believe they care about it much one way or the other."

Indeed, they were strangely apathetic. Though they might prove dangerous if aroused, because of their invulnerability to ordinary weapons, they seemed to be without any will or desires beyond those of satisfying bodily needs. When hungry, they made a nerve-torturing humming sound in a sort of sound-box located in the head cavity. Raising and lowering the pitch sufficed as a spoken language.

Frampton looked up as if striving to pierce the clouds, then listened intently. Nothing.

"Just the same," he muttered, "I think you ought to get out of here. No place for you."

Ellerbee finished paying off the shy natives, who giggled and grinned and

* Once the greenies were in the rich buyers' hands, the law could be defeated by one of several methods. Sometimes the registration of a dead chloro-man was transferred to the new unlawful entry; or a newcomer was attributed to the result of a union between two slaves (which occasionally actually happened) bought before the anti-slavery law was passed. The law did not operate *ex post facto*.

made loud smacking noises as they received their candy bars, and stared in wide-eyed ecstasy at the other gifts the old man's generosity netted them. Ellerbee looked at young Frampton out of inscrutable eyes.

"That's not the first time you've said that, son. Mean anything in particular?"

Frampton frowned helplessly and turned away.

"No. Let's get back to the station. You'll be wanting to notify the Company to send a freighter out here." The cheap, rattle-trap space ship whose crew no company would insure. The space ship that would take the chloromen to a strange world, if it didn't fall apart in mid-voyage, where they would live and die in slavery. The young man's mouth twisted with a sour taste as the two of them finished the inspection and tramped soddenly back to the house.

Young Frampton awoke from a restless sleep with the roar of rockets in his ears. He hastened to a window, opened it to sweep off the mist, then peered out. It was late. Another twelve hours and the long night would be on them.

"Rocket ship, son?" called Ellerbee from another room.

"Yeah. Can't see a thing, though. Listen." The rhythmic thunder of the rocket-tubes became irregular, sputtered feebly, then roared out full again. Several times the noise abated and picked up. "Hear that? Looking for us, probably. That's a landing signal."

"Right. Probably the Company ship."

Frampton hurried out without dressing, clattered down the stairs and around to the rear of the station. Here was a huge tank, with a four-inch pipe leading from it into the oblivion of the mist. A lever was thrown, and the throb of an electric pump began.

A quarter-mile distant, invisible from the station, was the landing field. A gigantic skeleton-work of lightweight pipes surrounded it, thrusting high into the air, equipped with hundreds of tiny high-pressure nozzles. Fluid from the big tank, a solution of calcium chloride, was pumped to the field and sent out in a lofty spray. The calcium chloride, with its tremendous affinity for water, quickly dissolved a vertical tunnel of visibility in the fog. Down this column of clarity the space ship could descend with safety.

THE booming of the rockets, queerly distorted and muffled by the clouds, thudded louder and louder against the ear-drums, then abruptly cut off. The sudden silence was painful, and Frampton shook his head to clear the ringing in his ears. He swung back the lever, and the pump wheezed to silence. Fog would once again be stealthily closing in over the field.

Frampton returned to the station to wait for the ship's officers to arrive. For several minutes he stood on the porch, straining at the tomblike silence of this alien world, broken only by the whispered puffs of the fungi bursting their spore-balls now and then. No one came.

Frampton stirred uneasily. Old Ellerbee quietly joined him on the porch and spoke.

"Wonder what's keeping 'em. Hear anything?"

"Not a sound. Usually you can hear noises from the ship, or voices. But I haven't heard a thing. Could they be lost?"

Ellerbee shook his head.

"I checked the trail-markers to the field not thirty hours ago. Something's wrong. I think we'd better—"

His answer came instantly, the deadly hiss of a heat-ray that sizzled through the white mists and spattered molten metal from the wall of the station. The old man cried out sharply, clutching his left arm as he lurched back through the door. Frampton dived in after him and slammed the door against a barrage of questing rays.

"Hurt?" cried Frampton.

Ellerbee didn't trust himself to speak. The sick odor of burning flesh stung the nostrils. As the old man's hand dropped away, an ugly, three-inch blackened spot was revealed high on his upper arm. He quickly opened a jar of sweet-smelling salve and slapped a generous handful on the wound. His eyes swam momentarily in tears of pain.

"That's better," he grunted. "Now let's get them!"

"Fine by me," ripped out Frampton savagely, rummaging in a locker for weapons. "What the devil's their idea, anyhow? Hi-jackers? If so, why try to murder us? They can have the damn' greenies for all I care."

The frightful hissing of several of the deadly heat beams sounded on the outer walls of the station. A front window fused and fell in, molten and steaming.

"They're taking no chances on being identified. If they were, the whole universe couldn't hold 'em. If the Patrol didn't run 'em down, the Company certainly would." Ellerbee turned, then looked at Frampton, mildly appalled. "Are those all the weapons you could find?"

In the young man's hands were four heat-ray pistols and one of the cumbersome but deadly single-shot cathode projectors, with half a dozen charges.

"Not prepared for a siege, are we?" Frampton smiled wryly.

The old man shrugged with fatalistic calm.

"Well, let's get to work with what we have."

Things began to hum. Every movement, every vague shape that wavered in the mist outside was the recipient of a red-hot blast. Every window, every aperture in the station walls, was a target for the raiders. Men screamed in agony now and then, their cries flat and echoeless and strangely remote. Once or twice the blinding, deadly cathode bolts whammed against the metal wall. Frampton shuddered. Almost any kind of a hit with a cathode was fatal, horribly so.

There was perhaps twenty minutes of desultory sniping, with no damage to either side. Then the attack was renewed with vicious intensity *from above!* First intimation came to the defenders when the small skylight shattered in upon them in a shower of hot fragments of glass. Steaming bolts hissed in through the opening in the roof.

ELLERBEE and Frampton scampered for the corners, out of the line of fire, gazing at each other with startled eyes. Ellerbee cautiously maneuvered himself to get a peep through the broken skylight. What he saw brought a chuckle to his throat. He beckoned to Frampton.

"Get an eyeful o' that, son!"

And Frampton did get an eyeful of the strange things that swooped down suddenly from the security of the mist, with faint swishing sounds, taking potshots at the station and skimming away again like an airplane strafing the enemy.

The bat-men of Jupiter! Strange form of intelligent life from the largest of the planets. Their six prehensile legs were now being used to manipulate a weapon of destruction. Built with sturdy frames to withstand Jovian gravity, but with thin, membranous skins and numerous air-pockets to make them a sort of semi-lighter-than-air creature, they were at home in the furious gales that rage eternally on Jupiter. Twin sheets of skin extending from front to rear, enabled them to glide with "wings" outstretched like the flying squirrel.*

A half-dozen experimental shots told Frampton the story.

"Old-timer, this is bad! They go too fast to get a bead on 'em. They're through a heat beam before it can do any damage!"

But Ellerbee, for the first time since Frampton had known him, had the gleam of animation in his eyes. Once again he was commander, dominating, swift and concise.

"Think we're licked, eh? Get the searchlight!"

The young man gaped.

"Searchlight?" The station was equipped with a small but powerful spotlight, portable, which sometimes came in handy when emergencies arose during the long night.

"You heard me! The searchlight!" snapped Ellerbee.

"Yes, sir." Frampton slipped the coverings off the light and trundled it into the main room.

Ellerbee wheeled it into position, aiming up through the skylight.

"Stand by with your gun, ready for

* In the lesser gravities of the smaller planets, the Jovians found they could develop muscles that would actually move their winglike membranes up down, enabling them to fly awkwardly, instead of gliding.

action! This is a trick I learned ten years ago."

As the next bat-man appeared from the clouds, Ellerbee snapped on the dazzling beam and pinned the strange creature in the air. To Frampton's amazement, the Jovian appeared to struggle in awkward panic, fluttering down the light beam in jerky circles, helpless.

"Get him!" Ellerbee's voice snapped in his ear, and Frampton went to work in earnest on his easy target. Soon the Jovian fell to the ground, twisted and smoking. A second bat-man was similarly brought down a charred crisp, a third, a fourth, a fifth. Then the aerial attack was halted.

Ellerbee switched off the spotlight and turned to Frampton, bright-eyed and triumphant. The old man was reliving the past. He was a fighting man once again.

"Phototropism," he explained. "The muscles of the Jovian's bodies are always taut, normally. When light falls sideward on an insect, it starts photochemical changes in one of the eyes, affecting one side of the brain. Muscle tension on the opposite side of the body is lost, and movement, whether walking or flying, will be in a circle. The Jovians, like moths, are not attracted by light, but are forced against their wishes to drop into its rays."

The siege settled down to a half-hearted sniping again. The station was gradually being sieved, and the refrigeration plant was working steadily to keep the temperature down.

"Doesn't seem to be many of 'em," Ellerbee remarked. "If the station walls aren't burned away, we may be able to hold 'em off until night, or till the Company ship arrives."

Hard on the heels of his remark, a faint, sinister humming made itself faintly heard through the murk. Louder it came, half-wail, half-moan, rising and falling an octave at a time.

"The greenies! They've been freed!" Ellerbee cried.

HE paused a moment to listen intently. From long association Ellerbee could interpret many of the strange voice-sounds of the chloro-men, even converse with them haltingly.

"They've been drugged," he said excitedly. "Turned against us somehow. Look!"

Framptom moved over to the front window. Just emerging from the twisting fog came a ragged line of the strange creatures, eyes rolling weirdly, arms waving. Skulking behind them for protection came a few hesitant figures of the hi-jackers.

Framptom raised his weapon, but Ellerbee grabbed his arm.

"No!"

Framptom wrenched free.

"What d'you mean: no! You can't be thinking about your ten thousand now, surely! They mean business. They're dope-crazy. It's kill or be killed, man!"

Ellerbee shook his head.

"That's not it. D'you suppose those fellows are risking the value of what they came here to steal? Not a bit of it. Those greenies are hard as the devil to kill. They have to be literally cut to shreds. We've already burned out one heat-ray gun. It'll take two more probably to stop that advance."

Frampton stared at the deliberate advance, ponderous and inevitable as a Juggernaut.

"Then what—"

Ellerbee cut him off, began speaking rapidly in brittle, to-the-point phrases. As the younger man listened, admiration and respect brightened on his face. When the old man finished, Frampton whirled like a cat.

"I got it," he snapped, and ran for the rear of the house. He found time to wonder fleetingly how he had ever thought Ellerbee a broken and pitiable creature.

In a small storeroom he seized the last remaining keg of salt under one muscular arm and scrambled through a window onto the encircling balcony. A narrow catwalk ran from the balcony to the big calcium chloride tank, and he ran across recklessly. Quickly tapping the keg, he dumped its contents into the tank, then hurried down a ladder to the ground.

The wicked hiss of an adversary's heat-ray greeted him, coming so close he felt the singe of its passage. He

ducked behind the tank for safety. For a minute the two of them played a cat-and-mouse game about the tank, but Frampton was wild at every second's delay. Desperately he jumped into the clear to duel it out with his opponent. Then, from above and behind, came the snap and thunderclap of a cathode bolt as it ripped past his shoulder. Electricity transmitted on ionized air hurled him to the damp soil, left him momentarily dazed, paralyzed.

He glanced behind him painfully. Old Ellerbee had deserted his post to cover his young partner. He pointed silently with the muzzle of his gun to the dead and twisted body of the man who had out-flanked Frampton in the obscurity of the mist, and who had been about to cut him down.

Frampton shivered, and cold sweat popped out on his brow. He jumped to his feet without further waste of time and ran to the lever controlling the electric pump, threw it over. A half-dozen powerful twists shut off the flow of fluid through the pipe to the landing field. He unrolled the thick coils of emergency hose that hung on a prong beside the tank and ran back to the station.

In Ellerbee's absence, the chloro-men, with their slow gliding movement, had reached the steps already. Behind them, growing more and more bold, slunk the scavengers, unkempt, bearded outlaws. Frampton slipped underneath the station platform, aimed the hose at the horde of greenies, and opened the nozzle.

A gigantic stream of concentrated solution of calcium chloride and sodium chloride sprayed a blinding shower over them. They paused. The weird humming changed key. Frampton thought he detected a note of panic, of fear. And he smiled, half grimly, half pityingly.

The chloro-men turned to flee, obeying their near-dormant instinct of self-preservation, but they were far too slow. They turned a sickly, washed-out color. They began to shrink, rapidly sagging in collapse under the deadly spray. In three minutes they lay on the ground twitching limply, scattered green blobs of helpless cells.

WITH the first shower from the hose, the mist had thinned in a wide arc before the station, and the raiders, after a sharp exchange with Ellerbee in which one man had gone down with his face a hideous blackened ruin, quickly retreated to the shelter of the clouds. Frampton shut off the hose, opened the pipe to the field, and left the pump going. Scaling the ladder up the side of the tank, he quickly made his way back into the station. A triumphant Ellerbee shook hands with the grinning Frampton.

"Boy! That got 'em, Old-timer," Frampton exulted. "Just as you said. But what exactly was it that struck them down?"

"Plasmolysis. You sprayed 'em with a salt solution much more concentrated than the solution in their individual cells. Exosmosis resulted, the water passing from the cell sap outward through the cytoplasmic membrane. The vacuoles in each greenie became smaller, and the cytoplasm shrank from the cell wall. They literally *wilted* before your eyes."

Frampton risked a glance through one glassless window.

"Dead?"

"Oh, no. That's the beauty of it. Those creatures are much more resistant than an ordinary plant. They'll come around good as new in a few hours. Plenty o' moisture in the atmosphere always, so they can easily refill their cells when the salt solution disappears."

The exultation of the defenders was short-lived, however. Made more desperate by approaching nightfall, the raiders rolled a felled tree into view in the clearing around the station. From its shelter two sultry, crimson beams played hotly on one of the stiltlike legs that supported the corners of the station.

The acrid odor of molten metal assailed the nostrils. The station began to quiver jerkily, then sagged heavily at the corner as the leg snapped. Ellerbee and Frampton slipped and fell, rolled down the sharp incline into the corner where they bounced in a tangle of arms and legs as the house swayed, still supported on three legs.

The heat-rays outside began working on a second support.

Frampton grinned.

"Begins to look like the finish. Night won't be here in time to help do anything but preserve the bodies."

Carefully the two of them crawled up the slanting floor to remove their weight from the weakened side. Ellerbee's serene, faded eyes didn't even blink at the prospect. He gloried in this chance to die fighting.

"We can cross the catwalk and perhaps escape into the mist," he suggested. "Though if the Company ship doesn't arrive before night, or if we get lost —" He spread his gnarled hands suggestively.

"Just the same," said Frampton cheerily, "we're going to take that chance. Get moving, Old-timer."

Cautious reconnoitering failed to disclose any lurking figures at the rear, a circumstance suspicious in itself. But the second support in front was already buckling under the strain, groaning. So Ellerbee slid out the window onto the catwalk and moved quickly over to the tank.

Down the ladder he went, and what noise he made was covered by the throb of the pump, and by the bang and clatter of the movable furniture as it rolled forward and smashed into the front wall. Ellerbee vanished into the safety of the mist.

Frampton darted forward to follow, but as he did so, the vicious rip of a cathode-bolt slammed the air. Before his eyes the catwalk burst asunder into a dozen twisted fragments, and, striving desperately to leap the remaining distance to the tank, he fell.

THE slightly lesser gravity and the spongy soil tended to break the force of his fall, but one ankle turned under him as he struck. Pain knifed up through his leg, and he bit his lips to stifle a groan. He was through.

"Run for it, Ellerbee!" he bellowed into the obscurity of the mist. "Don't wait for me!" Then he crumpled to the ground despairing as Ellerbee came at a clumsy run out of the fog in a frantic effort to rescue his injured partner. But in vain.

Like sinister ghosts a half-dozen black-winged creatures materialized from the murk in a ragged circle about the two men. Their man-made weapons were held in readiness as they squatted in silent threat on the damp ground. Behind them, resolving into focus like a television close-up, came the leaders of the raiding party — black-bearded fellows, dressed dirtily and cheaply, with grinning white teeth and a predatory gleam in their eyes.

"Toss your guns this way," called one of them in gruff command.

Ellerbee glanced about sharply.

"You're going to murder us anyhow," he answered loudly. "Why shouldn't we fight it out? If you want us to give in quietly, give us some guarantee we'll not be burned down."

The raider's reply was instantaneous. He flipped up his gun and bored a sizzling hole high in Ellerbee's thigh. The old man dropped his weapon and convulsively clutched at the wound. Bitter curses came to his lips. The batmen raised their weapons to finish the job, aimed. A thin scream zipped past, and another, and then a host of them. The metal walls of the drunkenly sagging station rang sharply in a devil's tattoo.

There came the *thunk* of tiny projectiles whipping into soft, membranous flesh, the buzz of a ricochet as they struck glancingly off a thick skull. A swarm of whiz-bang beetles had hurtled blindly into the clearing.

The Jovians let out a series of hoarse yelps and took to the air as the whiz-bangs riddled their frail bodies. The dark-faced outlaws hesitated, then flung themselves to the ground in compact, curling balls, the only protective measure possible. Frampton seized Ellerbee about the waist, recklessly attempting to drag the two of them to the shelter of the mist, but it proved too much for him. The whiz-bang beetles had blundered their deadly way through the clearing and vanished before the two men had even reached the calcium chloride tank.

But as the raiders picked themselves up from the wet earth, and as the ugly, winged Jovians swooped back to rest, a shrill whine split the silence in ever-

increasing volume. All activity was suspended in mid-moment.

Everyone recognized that shrill crescendo—the motor of one of the new centrifugal flyers, the stern of which contained a centrifuge potent enough to move a mountain, with millions of tiny rotors running in blasts of compressed air, millions of tiny tops generating sufficient energy to hurl the ship through space at terrific speed.

Ellerbee looked at Frampton in startled incomprehension, then at the still pounding electric pump. Frampton read the thoughts as they passed in review in the old man's eyes. The field was under spray, and the new arrival would be able to land. Frampton had deliberately left the spray apparatus going; therefore he expected the ship.

Company ship? Not likely. The Company owned a few of the new centrifugal flyers, but they wouldn't risk one to the vagaries of the slave-smuggling trade. If not a Company ship, then what? Very few private concerns could afford them. Was it the Interplanetary Patrol? Was Frampton, then, a Judas!

EXPLANATIONS were cut short by the sudden cessation of the centrifuge motor, the breaking out of distant battle, shouts and the crack and hiss of guns. This quit as suddenly as it began, punctuated by a deafening concussion and the far-off rain of metallic debris following the explosion.

"There goes their rocket-ship!" cried Frampton delightedly.

Raiders and their Jovian allies alike vanished toward the landing field.

"And there go the hi-jackers!"

Ellerbee clamped his jaws tight and struggled to his feet. The wound itself was not dangerous, as the heat-ray's passage cauterized it instantly. But the leg was weakened considerably, and the old man was forced to hobble along on one foot.

"And here goes Ellerbee," he said, half bitterly, half sorrowfully. He hopped away toward the mist curtain that shrouded the little clearing.

Frampton, also favoring one leg, jack-rabbited after his partner and gently sat him down on the ground.

"Oh, no, you don't. You stay right here," he grinned.

Ellerbee grimaced in pain.

"Kind o' rubbin' it in, ain't you, son? I didn't think you'd arrest me—"

Another spasmodic burst of firing sounded n e a r b y, then footsteps sounded through the murk, approaching invisibly. Presently a squad of men appeared, wearing the uniforms of the Interplanetary Patrol. They were led by a lieutenant, who came to a halt before the two men on the ground.

"Lieutenant Howe reporting, Captain Frampton," he saluted, smiling.

"Excuse the apparent discourtesy, Lieutenant, but I find it painful to stand. You scattered those hi-jackers?"

"To the four winds, sir. A short wait should bring the slave-ship right into our waiting arms, and another link in this rotten traffic will be wiped out. Is this your prisoner, sir? Shall we put him in irons?"

Ellerbee lay face down. At the words he rolled over.

"Not at all," Frampton cried heartily. "This is my colleague, Ellerbee." He stretched out a hand and pulled the old man to a sitting position, then spun his fluent falsehood. "He had himself busted out of the Patrol in order to work himself into the slave-ring. He's got a future in the Service."

Ellerbee and Frampton exchanged a long glance, in which Frampton paid silent and whimsical tribute to the creed of loyalty and that prevented him from revealing his true status before now. Old Ellerbee glanced down at the tiny token left in his palm when Frampton's helping hand had pulled him upright. It was metal, cut in the form of an all-seeing eye, mirroring the sun and the planets. The letters I. S. S. were embossed on it. The Interstellar Secret Service!

Ellerbee clutched it tightly and thrust his shoulders back. It was plain what that token meant to him—respect, honor, manhood, all those things that had been stripped from him four years before. His eyes were strangely misted as he looked around the clearing. The young lieutenant, Howe, clicked his heels and saluted smartly.

"At your service, sir," he said.

ZARNAK

By Nax Plaisted

"THE SUPREME ONE, MASTER OF MERCURY"

IN THE YEAR 2936 I, ZARNAK --- SET OUT INTO SPACE IN SEARCH OF AN EXPEDITION OF EARTH PEOPLE WHO HAD DEPARTED CENTURIES EARLIER.

AFTER A NUMBER OF ADVENTURES, I LANDED ON MERCURY.

THE MERCURIANS WERE ABOUT TO DISSECT ME IN AN EFFORT TO DISCOVER WHY MY LIFE SPAN WAS SO LONG, WHEN I WAS SAVED BY A BEAUTIFUL GIRL, ETARRE.

ESCAPING WITH ONE MERCURIAN AS OUR PRISONER, WE WERE CAPTURED BY THE INSANE RACE OF MERCURY WHO INHABIT THE DENSE FORESTS IN THE TEMPERATE ZONE OF THAT PLANET.

WE WERE LED BEFORE THEIR MAD RULER, THARK, WHO TOOK US TO HIS LABORATORY. HE STRAPPED US AGAINST THE WALL AND TURNED ON A STRANGE RAY THAT WOULD DISSOLVE OUR BODIES AND LEAVE OUR EGOS UNDER HIS CONTROL!

AH! THERE IS THE SECRET RAY THAT WILL FREE YOUR WILLS.

WHILE I AM MASTER OF ALL THINGS MATERIAL, LONG HAVE I DESIRED TO KNOW THE SECRETS OF THE SUPERNATURAL -- YOU WILL TEACH ME THAT --- THEN, TRULY, WILL I BE MASTER OF THE UNIVERSE. AH! ALREADY YOU ARE DISSOLVING ---- I CAN SEE THROUGH YOU!

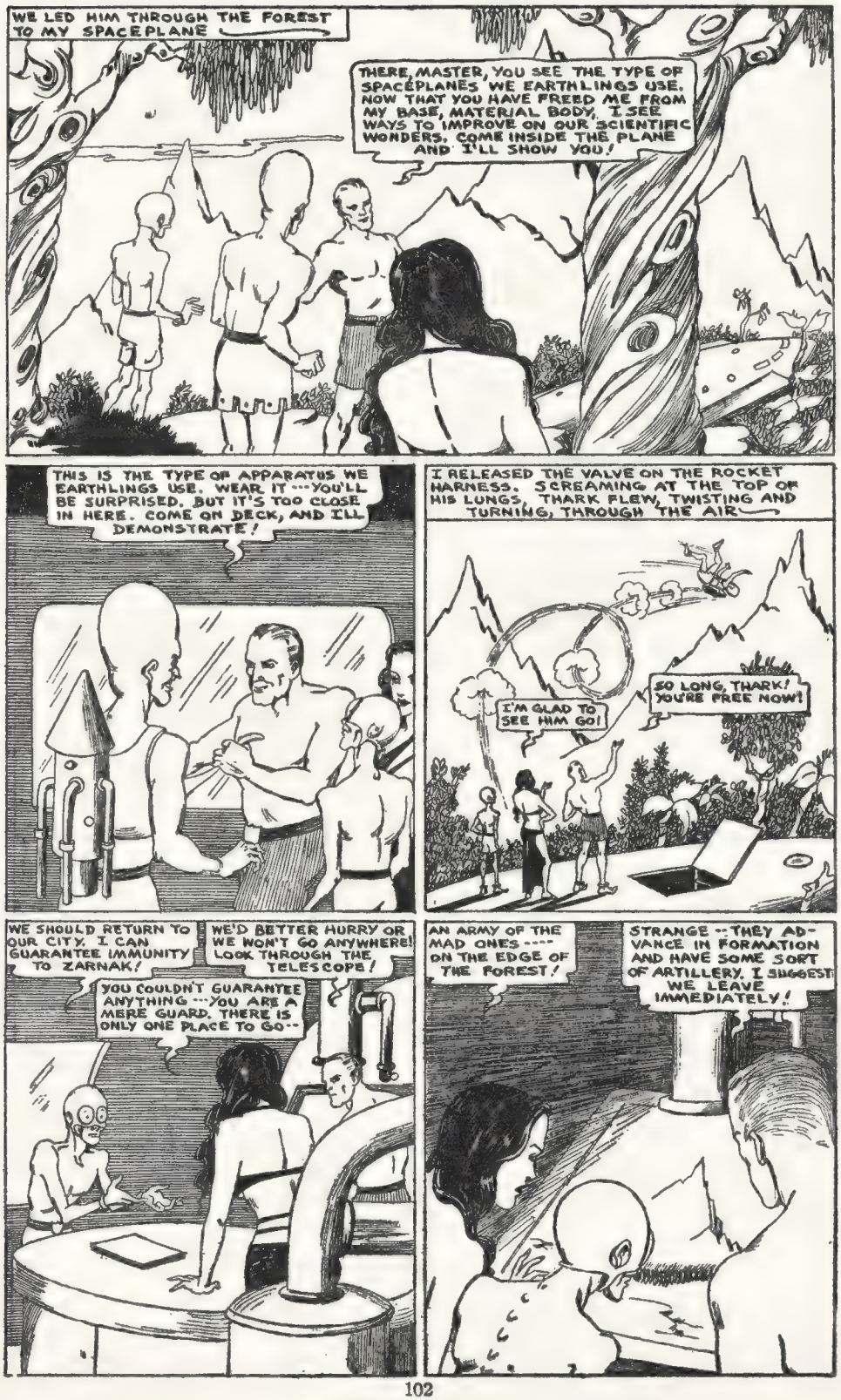
HAY, I FEEL ALL RIGHT. WHAT'S HE UP TO? I'M JUST AS MATERIAL AS EVER --- AND I'M SURE YOU ARE. WHY --- WHY -- HE MUST BE CRAZY AND HIS MACHINE IS HARMLESS! HE'S IMAGINING ALL THIS. I'VE AN IDEA ---- FOLLOW MY LEAD!

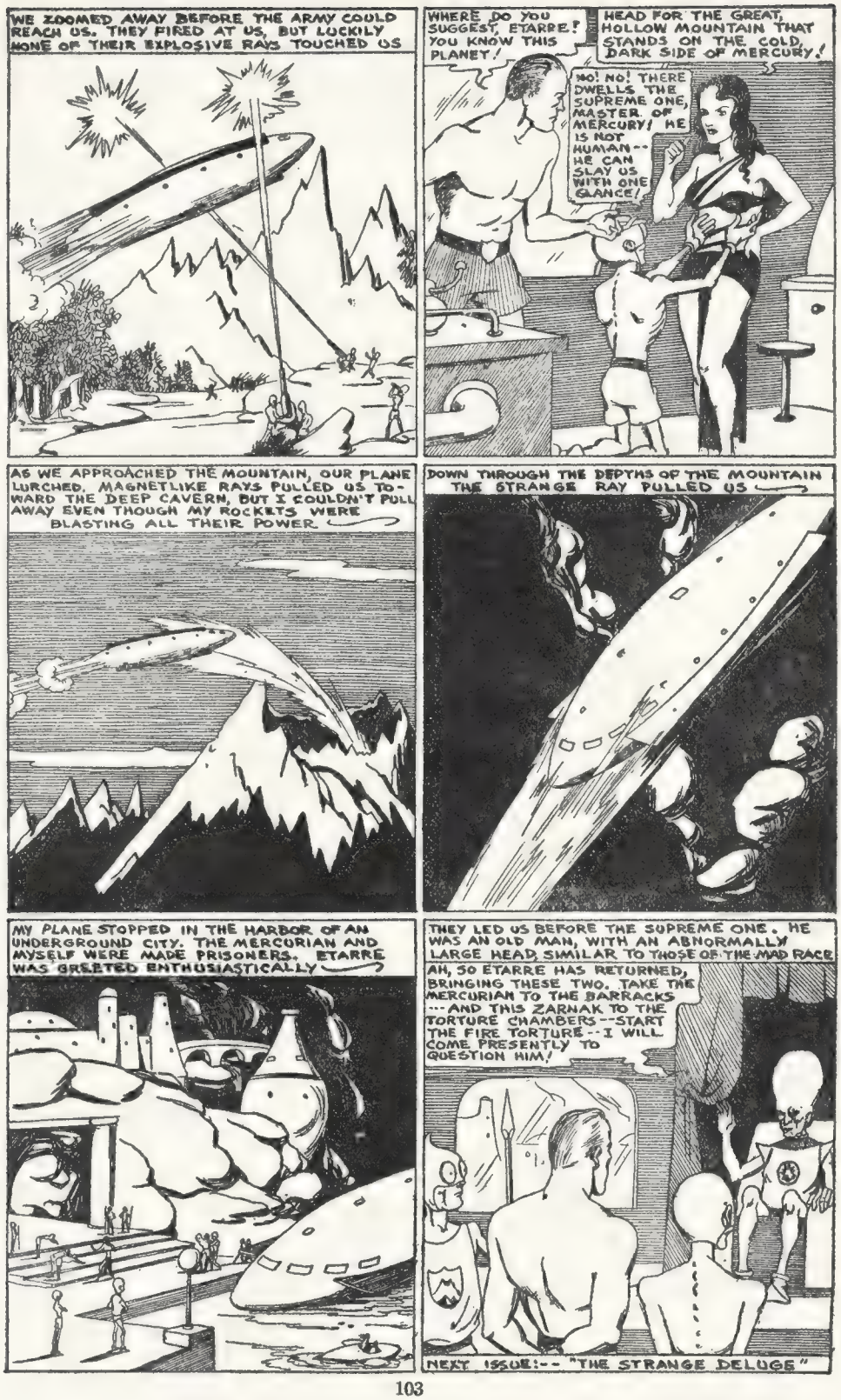
OH, THARK, OUR MASTER, WE HAVE LEFT OUR PHYSICAL BODIES NOW. BUT EVEN SO, WE ARE HELD BY YOUR POWERFUL BONDS. RELEASE US, AND WE WILL IMPART TO YOU OUR KNOWLEDGE AND MAKE YOU MASTER OF ALL MANKIND!

IS IT NOT WONDERFUL? AM I NOT A GENIUS? YOU WILL THANK ME GREATLY. IS IT NOT PLEASANT TO BE FREE?

I NEVER FELT BETTER IN MY LIFE. WE THANK YOU FOR FREEING US. FOLLOW US -- WE HAVE GREAT THINGS TO TEACH YOU

[Turn Page]


WE LED HIM THROUGH THE FOREST TO MY SPACEPLANE
THERE, MASTER, YOU SEE THE TYPE OF SPACEPLANES WE EARTHLINGS USE. NOW THAT YOU HAVE FREED ME FROM MY BASE, MATERIAL BODY, I SEE WAYS TO IMPROVE ON OUR SCIENTIFIC WONDERS. COME INSIDE THE PLANE AND I'LL SHOW YOU!
THIS IS THE TYPE OF APPARATUS WE EARTHLINGS USE. WEAR IT --- YOU'LL BE SURPRISED. BUT IT'S TOO CLOSE IN HERE. COME ON DECK, AND I'LL DEMONSTRATE!
I RELEASED THE VALVE ON THE ROCKET HARNESS. SCREAMING AT THE TOP OF HIS LUNGS, THARK FLEW, TWISTING AND TURNING, THROUGH THE AIR
I'M GLAD TO SEE HIM GO!
SO LONG, THARK! YOU'RE FREE NOW!
WE SHOULD RETURN TO OUR CITY. I CAN GUARANTEE IMMUNITY TO ZARNAK!
WE'D BETTER HURRY OR WE WON'T GO ANYWHERE! LOOK THROUGH THE TELESCOPE!
YOU COULDN'T GUARANTEE ANYTHING --- YOU ARE A MERE GUARD. THERE IS ONLY ONE PLACE TO GO--
AN ARMY OF THE MAD ONES ---- ON THE EDGE OF THE FOREST!
STRANGE -- THEY ADVANCE IN FORMATION AND HAVE SOME SORT OF ARTILLERY. I SUGGEST WE LEAVE IMMEDIATELY!


WE ZOOMED AWAY BEFORE THE ARMY COULD REACH US. THEY FIRED AT US, BUT LUCKILY NONE OF THEIR EXPLOSIVE RAYS TOUCHED US
WHERE DO YOU SUGGEST, ETARRE? YOU KNOW THIS PLANET!
HEAD FOR THE GREAT, HOLLOW MOUNTAIN THAT STANDS ON THE COLD, DARK SIDE OF MERCURY!
NO! NO! THERE DWELLS THE SUPREME ONE, MASTER OF MERCURY! HE IS NOT HUMAN -- HE CAN SLAY US WITH ONE GLANCE!
AS WE APPROACHED THE MOUNTAIN, OUR PLANE LURCHED. MAGNETLIKE RAYS PULLED US TOWARD THE DEEP CAVERN, BUT I COULDN'T PULL AWAY EVEN THOUGH MY ROCKETS WERE BLASTING ALL THEIR POWER
DOWN THROUGH THE DEPTHS OF THE MOUNTAIN THE STRANGE RAY PULLED US
MY PLANE STOPPED IN THE HARBOR OF AN UNDERGROUND CITY. THE MERCURIAN AND MYSELF WERE MADE PRISONERS. ETARRE WAS GREETED ENTHUSIASTICALLY
THEY LED US BEFORE THE SUPREME ONE. HE WAS AN OLD MAN, WITH AN ABNORMALLY LARGE HEAD, SIMILAR TO THOSE OF THE MAD RACE
AH, SO ETARRE HAS RETURNED, BRINGING THESE TWO. TAKE THE MERCURIAN TO THE BARRACKS --- AND THIS ZARNAK TO THE TORTURE CHAMBERS -- START THE FIRE TORTURE -- I WILL COME PRESENTLY TO QUESTION HIM!
NEXT ISSUE:-- "THE STRANGE DELUGE"

THE BLACK VORTEX

The space ship plunged inexorably toward the vortex

Kenneth Armstrong Vanishes in the Cosmic Sky-Eater that No Science Can Explain—and Returns to the Earth as an Atomic Ghost!

By FRANK BELKNAP LONG, JR.

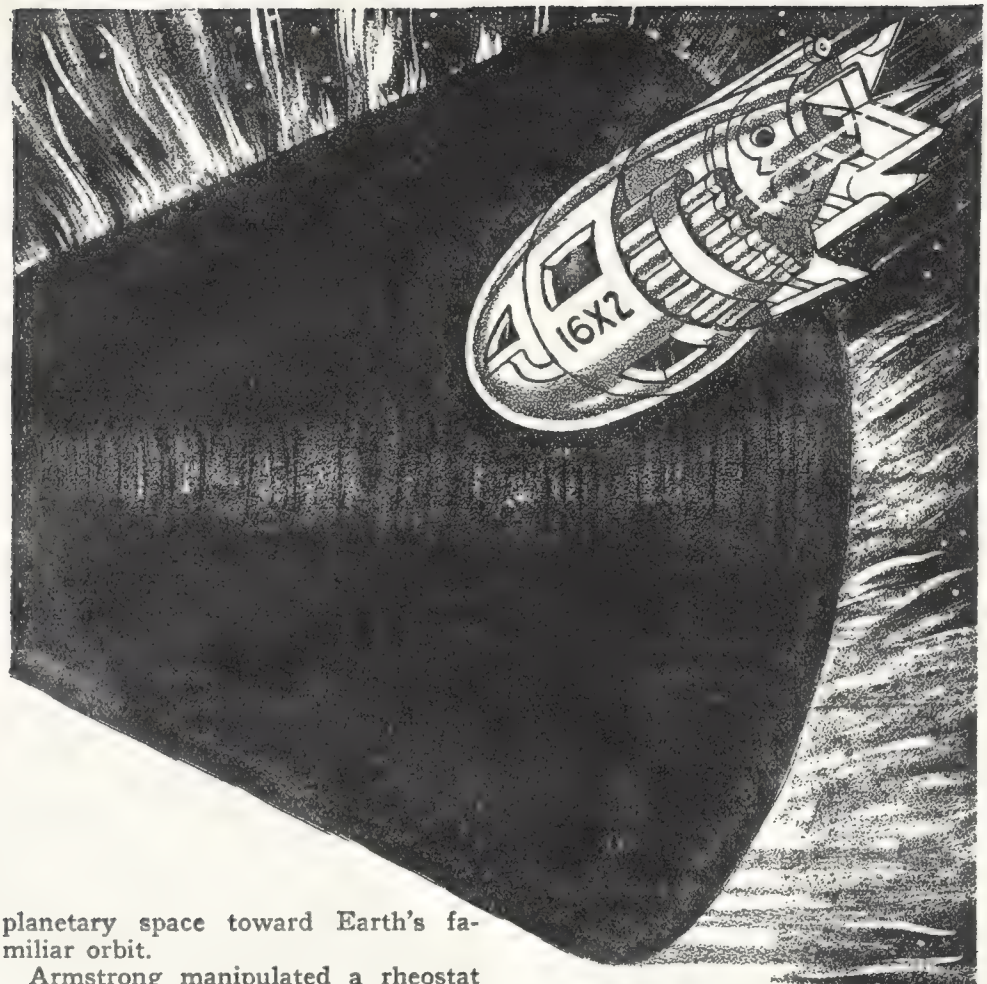
Author of "Invaders from the Outer Suns," "Cones," etc.

THE little space ship was approaching Mars' orbit at a maximum acceleration of three thousand miles a minute. As it swung inward in a wide arc toward the red planet, Kenneth Armstrong sat exultantly at the controls in the stern pilot-chamber and gazed out through inches-thick quartz at a majestic vista of bright, little worlds in confluence.

Filling all the cold, black immensities behind him with whorls and spirals of reflected flame the fleeing asteroids seemed like miniature replicas of far-off spiral nebulae and the ghosts of perished suns. Some were tinier than the inconsequential meteors and bolides which collide with Earth in her pilgrimage; others measured five hundred miles or more in diameter. Some were perfect spheres, others ellipsoids, and still other jagged, shapeless masses of metal and stone.

Visible to the naked eye on Earth only as a faint *Gegenschein* opposite the solar disc, this vast assemblage of forlorn little space vagrants moved in eccentric orbits between immense and frigid Jupiter and the little colonized planet Mars.

Armstrong knew that in less than seven minutes he would contact the Martian meteorological station in the visual receptor behind him and behold the wrinkled, kindly face of old Thomas Caxton. From his lonely outpost amidst the Martian snows old Caxton would flash meteorological reports and even appear in person on the televisual screen to greet the young American as the little ship roared through the dark, frigid night of inter-



A Story of Dual Personality

planetary space toward Earth's familiar orbit.

Armstrong manipulated a rheostat amidst the glittering array of levers, dials and vertical flywheels on the control panel before him and the rear observation window winked shut. He swung about in his metallic pivot chair till the drum-shaped foresection of the visual receptor completely usurped his vision.

The tiny clock at the base of the illumed control panel ticked out the seconds and minutes in perfect harmony with eight or ten million timepieces on the remote terrestrial globe. The little clock was set to New York time. In New York at that moment it was precisely ten minutes to twelve on the last day of December in the year 2046. With any kind of luck, old Caxton's friendly face should appear on the receptor screen an instant before the great metropolis of the western world burst into sound and revelry in tribute to the new year.

As Armstrong was a native of New York he could legitimately share her joyous mood. The great, white, triple-tiered city of his birth would presently fling confetti to the stars and stand aureoled in radiance beside the wide Atlantic.

The Martian colonist would see a

face on the visual receptor which would radiate holiday cheer. Across the orbits of a thousand tiny planets Armstrong would extend the season's greetings and smile a little to himself in secret superiority, because old Caxton, being Mars-born, had no bright home city, no new year that he could rightfully claim.

Oh, it was really a rare moment. Armstrong had spent ten grim months in lonely, self-imposed exile on a planet that sucked all energy and life from the weak and crippled the strong — a planet that maimed the minds of men even when their bodies proved resistant and heroic.

For seven years the young American had piloted the little transports of the Jupiter Ore Syndicate across the bleak, interplanetary voids, and his knowledge of the spaceways had brought him fame and honor. But the precious ores in the storage compartment of his little vessel did not belong to the Syndicate this time. They belonged to the man who had amassed them through months of grim toil in the lonely mining outposts of the largest planet in the Solar System. Kenneth Armstrong was homeward bound from Jupiter with a cargo worth its weight in diamonds in Paris, London and New York.

On Earth a major joy awaited him. The flaming parade of little worlds so near to home and the thought of old Caxton were merely fillips which streaked across the deep, persuasive happiness in his mind, reminding him that even beauty and friendship were less indispensable than Corrine Clark. For Corrine Clark he had wooed death with valor and renounced even simple joys for ten dismal months. But it had been worth it.

The receptor screen was slowly filling with a wavering pattern of light. Armstrong was startled for an instant. He had already dialed the image field, but he had not expected that Caxton's face would materialize so suddenly on the white opacity before him. Usually the Martian colonist's voice came through first, visual transmission being retarded a little by ether drifts in the wake of the revolving planet.

UNMISTAKABLY the wavering crescents, spirals and cubes of light were clustering together in the center of the screen to form a human face. Armstrong's eyes clung to the wavering image as its scattered sections synchronized on the white screen. He experienced an ominous foreboding even before the features ceased their violent flickering and old Caxton's eyes burned tragically into his.

Old Caxton's face was a quivering mask of horror. His mouth trembled, and his head jerked and twisted curiously. It was as though panic had seeped up through his being and profoundly affected the movements of his head and neck. The veins on his temples were bulging blue cords.

As Armstrong stared in apprehension the aged watcher by the Martian pole began to speak furiously. No sound came from the televisual screen but as the young pilot watched the Martian's swiftly moving lips form unmistakable vowels and consonants a great horror crept upon him.

Gasping, he swung about in his chair until he was facing the control panel. Instantly he perceived that the dial which controlled auditory reception had slipped a fraction of an inch. Doubtless the rhythmic throbbings of the little craft had spun it a millimeter beyond the narrow Martian diacoustic field.

With tremulous fingers he grasped and adjusted the little dial. Immediately a shrill, hysterical voice filled the pilot-chamber.

"For God's sake, Armstrong, answer me! I've been talking for two full minutes. Is the diacoustic field blocked out?"

Armstrong swung swiftly toward the receptor again, grasping the vertical release lever which controlled the transmitting instrument as he did so. Immediately a wafer-thin crescent of metal with a surface of bright filar meshing descended from the ceiling of the chamber and slid automatically into the metal groove at the summit of the televisual screen.

Armstrong addressed the bright surface directly.

"Only your image came through,

Caxton," he exclaimed. "Auditory reception was blocked until just this minute. Can you hear me plainly now?"

Caxton's lips moved again and this time his words were clearly distinguishable.

"Yes, I can hear you, Kenneth. Your image is forming too. Don't try to tell me why my voice didn't register. No time for that now. Kenneth, how fast are you traveling? It is of the utmost importance that I know your speed."

Armstrong thought an instant.

"I can't tell exactly," he said. "I just throttled two of the blast engines and the propulsion gauge won't register until the choke pressure eases up a bit. But chances are I'm still traveling at maximum acceleration."

Caxton's aged face seemed to cave in. The horror in his eyes flared so brightly that Armstrong stiffened in instinctive alarm.

"What is it, Tom?" he exclaimed in a frantic tone. "What is wrong?"

"You are traveling much too fast to save yourself," Caxton almost screamed. "In less than thirty seconds you will collide with the black vortex! I tried to warn you when I located it in the observatory refractor. Its position was fairly constant all last month, but this morning it left the zone of planetoids and approached Mars so closely that we feared it would engulf us. Now it's swung out again. It's about 0.14 outside our orbit and directly in your path. Oh, why didn't you—"

CAXTON'S words ceased with an appalling suddenness. The next instant his image vanished from the receptor screen. It did not recede with gradual flickerings, but disappeared in a flash, as though something had intercepted the visual field.

Panic stilled Armstrong's heart beats. His lean hands descended and tightened on the arms of his chair.

The black vortex was a strange, ghastly anomaly of space. It had been seen in every region of the sky between Jupiter and the solar disc. Moving more swiftly than the receding suns of outer space, it rushed with menacing deviations through the gulfs between the planets, cutting across innumerable orbits and resisting the gravity tugs of spinning worlds.

It had first appeared in the telescopes of Earth in 1998. It had been viewed from Mars and Venus in 2007. It had completely baffled the astronomers, and the astrophysicists. To the uneducated it was not only baffling, but an object of awe. When they thought of it at all they thought of it with horror. The intrepid pilots of the spaceways regarded it grimly as a challenge, but to the grossly superstitious it had already become an object of worship.

In 2025 it had consumed the little asteroid Ceres. In 2031 Eros had vanished into its black opacity. It was a kind of cosmic *eater*. It consumed whatever crossed its path. It had undoubtedly devoured hundreds of small meteors and aerolites.

It appeared merely as a funnel-shaped smudge in the sky. Its outer surfaces dimly reflected light, but it was only clearly visible when it appeared in black silhouette against the fiery disc of the sun. It was larger than any of the inner planets, but considerably smaller than Saturn or Uranus. Though it had passed within a few million miles of the solar orb its bulk had survived unscathed in proximity to the withering incandescence of the photosphere.

Speculations as to its nature by the learned and the unlearned were as ingenious as they were sterile. Stockbridge, the American astrophysicist, was unable to comprehend how any body possessing density and mass could remain immune to gravity.

Seaton, of the California Institute, thought that it was a little burnt-out sun no bigger than Van Maanen's star which had strayed by chance within the sun's gravitational field and resisted that field by some hitherto unfathomed idiosyncrasy of space-curvature.

Darrow, of Cambridge, was of the opinion that it was a mass of potential energy which had not as yet begun to disintegrate in response to the second law of thermodynamics, and that such primal Universe substance was per-

haps capable of absorbing solid bodies much as an amoeba absorbs small particles of food. In elaborating his theories he pointed out that nearly complete weightlessness might very well be another characteristic of such a primitive mass of energy-matter.

But to Kenneth Armstrong sitting rigid and white with terror in his metal chair abstract theories were of scant comfort. In less than thirty seconds he would know more about the construction and attributes of the vortex than all the scientists on Earth. In less than thirty seconds the ghastly anomaly of space would suck his midget craft swiftly and terribly into its black maw.

Nothing could save him. Old Caxton would have shrieked for braking had braking been feasible. Even if he throttled all the blast engines the little ship would continue its furious plunge to destruction. To strip off a single fuel-sheet, to change the course of the vessel a fraction of a spatial *winge* was a task impossible of accomplishment in so short a time.

SUDDENLY he became curiously calm. Some hidden reservoir of strength deep within his body poured revivifying fluids into his blood. He swung about until he was facing the control panel and the little ticking clock as his base. In less than a minute now the white, sea-splendid city of his birth would release its pent-up energies with a blare of trumpets and multisonous paeans to Time's new dawn. And somewhere in that immense metropolis a slim, pale girl, eagerly scanning skies flecked with stars and misty nebulae, would believe herself one with him in spirit despite the sundering void.

When he thought of Corrine Clark despair and agony flooded his being, dissipating the brave impassiveness of an instant before. Slowly the muscles of his face began to twitch.

The change occurred while he was watching the second hand of the little clock. He suddenly saw not one clock, but ten. The ten clocks in reverse, with twenty smaller clocks right side up on the panel below the inverted clocks. Then the lowermost row of little clocks reversed itself too.

The control panel altered appallingly. Originally an uncurved surface it became suddenly concavo-convex. The complex array of dials and levers receded sharply as the top of the panel blurred.

The next instant Armstrong became aware of a startling change in himself. As the central portion of the control panel retreated his body lengthened. Lengthened hideously and unevenly. his right leg seemed to melt and flow away in the direction of the panel.

The right side of his body underwent a less pronounced but frightening change. It slowly swelled, then receded jerkily from his waist to his toes. He saw his right foot a yard, then three yards and finally ten yards away. His left leg became a thin, wavering filament that extended through and far far beyond the now hideously distorted control panel into a region of cascading light.

All the familiar dimensions altered shockingly. The control panel became a thin, transparent shell with curling and unstable edges. Its malformed appurtenances glimmered in rapidly receding outline against a vast field of pulsing light.

He saw his left foot as a tiny black blob at the end of a wavering thread of blackness and his right, swollen to five or six times its natural size, as a melon-shaped mass against this pulsating glow.

He was conscious of a *directional* change also. His body seemed to revolve without movement and he had the ghastly and utterly inexplicable feeling that he was gazing in several directions at the same time and even moving simultaneously backward and forward and around and around in a kind of rhythmic waltz.

The ghastly change was mercifully of short duration. Almost immediately the distorted and distended outlines of the control panel and his unevenly elongated body contracted into patterns of geometric sanity and gradually resumed their original contours.

The unfathomable region of pulsing light vanished and the panel shed its

transparency. It became a black oblong covered with dials and levers and little glistening knobs. The small clock at its base repented of its wild and vagrant multiplicity and settled down into the humdrum existence of an ordinary timepiece.

FOR an instant Armstrong remained facing the controls, staring at the restored and familiar switchboard in a kind of trance. Then terror flooded his being. With a cry he sprang from the metal chair and stared wildly about him.

Nothing had altered. Floor, walls and ceiling were unchanged. The cold light lamps cast a steady greenish radiance on familiar metal surfaces studded with triangular bolts and brightly illumined the unmodified array of glittering and complicated mechanisms as the base of the control panel.

Armstrong's knees began to shake a little. He gripped the back of the slightly vibrating chair and stood for an instant in an attitude of sagging incredulity. Something had occurred that was both frightening and terrible. The actual integrity of his physical being had been assailed.

He hadn't imagined it. There was no possibility of his having imagined it. For a brief instant of time, within that little space craft, the solid walls of his fleshy tenement had dissolved and everything about him had responded to some hideous subversion of natural law.

It was an appalling thought, with implications so fearful that he was reluctant to dwell upon them. Though he was shaken to the core of his being, familiar habits of thought and action swiftly reasserted themselves. He must find out immediately what had happened, must ascertain the *Typhoon's* position in space.

Quickly he reascended into the revolving chair and manipulated the rheostat which controlled the rear observation window. With a slight rustling the opaque covering screen withdrew, revealing a bright surface of translucent glass.

Filling all the skies beyond the window, glowing frostily against the ebon void, shone the familiar constellations —Cygnus and Capricornus and bright Andromeda, the triple tails of mighty Camelopardalis, Lyra and the golden splendor of Cepheus' gothic tower etched in glimmering relief against a background of diffuse and nebulous suns.

And there, too, was tiny Mars, glowing ruddily between the inconceivably remote and stupendous suns, traveling serenely in her little orbit about the sun. Far behind her the last fading vestiges of the receding asteroids cast a ghostly radiance athwart her elliptical course.

The little clock at the base of the control panel had ticked off old Caxton's thirty seconds and three full minutes in addition, and yet the *Typhoon* was still roaring evenly through the black ether gulfs toward the terrestrial globe. Toward white cities and green fields and the deep blue of summer skies.

Overwhelming relief pervaded Armstrong's being as he contemplated the miraculous constancy of the star-flecked skies behind him. Mars had actually shifted its position a few degrees and there was a slight difference in the alignment of the nearer constellations, but he failed to notice these subtle deviations as he freed the throttled blast engines and released fuel-sheet after fuel-sheet into the combustion chambers at their base.

MOOL, the leader mental, sat quietly in his cushioned chair, his thin, flaccid hands limply extended on the circular metal table before him. His great, heavily-veined and entirely hairless head was thrust slightly forward on his scrawny neck, in an attitude of resentful contentiousness.

His shriveled face was pallid and drawn with pain. Directly before him in a circular, mirrorlike device no larger than a pumpkin a face very like his own stared severely into his narrowed and heavy-lidded eyes.

The face was a three-dimensional image. Under a tiny, upturned nose huge, swollen lips, purplish in hue, addressed withdrawn and dangerous Mool, the dominant leader mental, in

accents of reproach.

"Your nerve degeneration test showed a deficiency of fat-soluble 77. It is a grave condition. The slightest over-exertion will bring on symptoms of incoordination, and spasms."

Slowly Mool's own immense lips moved.

"Sulu," he said, addressing the image. "I wish to forget for a moment that you are my medical adviser. I did not summon you to discuss my health. I am three hundred and ten years of age. At my age pain is an inseparable accompaniment of breathing."

Sulu frowned grimly. The veins on his hollow temples stood out in vivid relief against the pallor of his skin. He looked like the shriveled mummy of some hydrocephalic idiot that had resisted the twin blights of mindlessness and the tomb by gruesomely maintaining, in a desiccated, repulsive tenement of flesh, a kind of vampirish vitality that was indifferent to the inroads of time.

"My body is of small importance, Sulu," resumed Mool. "Only thought is eternal. The wretched Manuals are concerned with the vagaries of their intestines, but we need not ape their primitiveness."

"Why did you summon me?" said Sulu, impatiently. "You are behaving primitively when you ignore or sneer at my warnings."

On all Earth no other man would have dared address Mool in such a tone. But Sulu was a renowned healer and hence peculiarly indispensable. He had also passed so completely beyond personal desire that he scorned the reprisals of his kind. Life was still tenuously amusing to him, but so was the prospect of annihilation. He would have laughed at threats of exile.

Mool scowled; shook his immense, blue-veined head in negation.

"I want to talk to you about the unspecialized man," he said.

Sulu's mummylike face brightened with sudden interest.

"Ah, yes, I understand. He is the most stupendous challenge that the modern world has known. Think of it —we now actually possess a living example of human life in completely undifferentiated form."

Mool seemed to disapprove of the other's fervor.

"There is much that we do not know about the mental life of primitive man," he said, "but his anatomical structure was quite plainly the result of unselective mating. All fossil specimens show the same characteristics as this new specimen. The fact that he is alive is of course of great significance. But it is not exactly a challenge."

"But it is," protested Sulu, with a writhing of his monstrous lips. "He may die at any moment. At present he is in a state bordering on delirium. Frightened. Terribly, shockingly frightened."

MOOL slowly nodded and his purplish lips writhed, emitting curious sibilants and queer, labial diphthongs which harmonized almost musically with the rhythms of his speech.

"We have now definitely determined that the fossil type to which he belongs dates back fifteen million years. The spatial rent which engulfed him apparently held him suspended in a kind of super-dimensional vacuum while millenniums rushed past in the Universe outside.

"This of course completely confirms our recent speculations as to the nature and origin of the spatial rent. The rent is simply a tiny, shifting air-pocket on the surface of the expanding, four-dimensional Universe which leads into another, higher dimension. The air-pocket shifts erratically about on the surface of our swelling, 'bubble' Universe, just as any small defect in an unstable and mucilaginous mass will alter its position under the impetus of expansion.

"For millions of years the rent has followed and adhered to that particular segment or fold of the space-time continuum which contains the Solar System, appearing in our skies as a whirling, dark smudge and rushing at inconceivable velocities across the orbits of the planets. We know that the rent engulfs all objects which cross its path. Within the lifetimes of living

men it has devoured dozens of little asteroids. Apparently the swallowed objects are caught up in a kind of slow energy drift, or fifth dimensional limbo beyond the Universe of stars and nebulae and automatically ejected into the fullness of time."

Mool ceased speaking and sat an instant immersed in thought.

"I am about to receive a report on the dawn man, Sulu," he said at last. "I may want you to subject him to additional tests. Kalu is now making blood and epithelium tests in the Malawana laboratories at Keisen. When these are completed we shall study his mental and emotional reactions. The primitives of his epoch were skilled mechanically, but they killed one another like savage beasts in fierce tribal feuds which drenched the continents in blood. They mated without thought for the future.

"When viewed without sentimental bias even their mechanical achievements were of a low order—chiefly ingenious vehicles for transporting their primitive bodies from one portion of the earth to another, and an infinite variety of weapons for destroying these aimlessly transported bodies on land and sea."

"Might it not be wiser to isolate him for a few days at Malawana before we attempt further tests?" asked Sulu.

"I will decide that when I receive Kalu's report," said Mool. "I am about to block you out, Sulu."

Mool's flaccid hand went out again, manipulated the control knob. Instantly Sulu's three-dimensional image vanished from the recording instrument. Mool sat staring for an instant gloomily at the glowing metallic wall directly opposite him. The small, metal chamber in which he was sitting was illumined by a pale violet radiance which streamed in diffuse beams from its walls and ceiling.

From that tiny, glowing chamber Mool spoke in accents of command to all the great dominant leader mentals. From his immense and veined skull emanated the directional flow of activities infinitely complex and stupendous in their ramifications.

On all Earth's continents millions of toiling Manuals obeyed his imperious social will. With a single word he could silence the hum of mile-high cities and even still the ceaseless throbbings of the Cyclopean black power turbines at the southern pole.

Slowly his fingers moved on the knob again. There arose a brief, vibratory humming as another monstrous face filled the recording apparatus. This time the image spoke without waiting for Mool to address it.

"I have tragic news," said the image, its lips writhing. "The dawn man is a malignant carrier. I have discovered in his tissues, in latent form, the germs of the yellow and black scourges.

DESPITE his impassivity Mool's hideous features whitened a little. His lips jerked.

"Then we must destroy him, Kalu. It is regrettable, but we must kill him immediately. Our race is no longer even comparatively immune to the yellow scourge. If the plague should gain headway among us it would depopulate the continents."

"But perhaps we can destroy the germs by exposing his body to short-wave vibrations," suggested Kalu. "If we gave him an artificial fever—"

"No," Mool cut in. "It's too risky. We must kill him at once."

"But I am reluctant to—"

"My orders, Kalu. Kill him."

The image nodded slowly and waited with sorrowing eyes for Mool to block him out. This Mool presently did, with a little shudder.

Kalu shuddered, too, in distant Keisan. Across the immense Malawana laboratories he moved on his feeble, reedlike legs toward the pathetically helpless captive from the dawn world who lay imprisoned a short distance away.

The emaciated and unclad figure of Kenneth Armstrong was lying on a sloping stone slab at the base of an enormous cylinder of gleaming metal. His arms and legs were securely pinioned to the supporting slab by narrow copper bands. His head was lolling in lax agony.

Above him, glittering, alien shapes towered. There were immense glass

coils pulsing with colored lights, silver white cones which revolved in segments, enormous, translucent globes filled with green and purple fluids, retorts and condensers and incomprehensible shapes of flame.

Kalu was instinctively humane. He did not wish to destroy the brave little voyager from man's primitive past who had blundered by accident or design into the infinitely complex world of the large-brained Mentals. But Mool's decisions could not be questioned. Mool's will was a kind of social absolute, a magnified embodiment of millions of subordinate wills pulsing in harmony with his own.

Slowly and reluctantly Kalu gripped a horizontal support and drew himself up till the larger portion of his shriveled body rested on a circular disc at the base of the enormous cyclinder. From where he rested he could see the prostrate body of the dawn man on the tilted slide a few feet away. The great shining tube contained the primary coil of a high-voltage oscillator.

The immense glass plate condenser at its summit was charged to a potential of five million electron volts. When this tremendous potential was discharged through the spark gap at its base the tube coil would begin to oscillate, swiftly building up a pressure of twenty million electron volts.

Kalu intended to bombard the pinioned man on the slide with a continuous stream of high-voltage projectiles. In the space of a few short seconds he intended to shatter the atomic structure of the dawn man's body completely, reducing it to a tumultuous field of disorganized electrons and finally to nothing at all.

The dawn man was writhing frantically. His body was agonizingly arched on the tilted slab. As he strained against his bonds in a frantic effort to free himself his face slowly turned the hue of blood.

Kalu pitied him to the depths of his being. The groans which poured in a voluble stream from his lips were infinitely heartrending. But there was nothing that Kalu could do to ease the dawn man's torment. The torment was entirely mental, apparently.

THE dawn man was in the grip of an overwhelming terror. Apparently his brain was slightly awry. His eyes had a tragically haunted look. Kalu had noted several curious deviations of behavior while taking blood and epithelium tests. Well, it was understandable. The poor wretch was hopelessly adrift in time, millenniums removed from his kind. Perhaps Mool's insistence on extinction was merciful after all.

No use prolonging it, he told himself. In five seconds there would be no tormented human figure on the slide if he steeled himself and did what he had to do.

Slowly his nearly fleshless arm approached the isolated spindle gauge which controlled the primary circuit of the immense apparatus. As soon as his flaccid hands encountered the gauge his tremulous indecision vanished. He became all at once a god of the machine. The mere contact of his enfeebled frame with the cold, controlling mechanism of so vast a source of energy destroyed the human side of his nature until a vast impersonality engulfed him.

With a slight movement of his thumb and forefinger he manipulated the little gauge. Instantly millions of volts of searing, blinding energy ripped the wave packets from the lower extremity of the tube and blasted the nuclei of all the atoms in its path.

The stupendous downsurge of energy transmuted every inanimate substance beneath it in a flash. The slab vanished as terrific oscillations hurtled millions of electron volts across a circumscribed area of empty space toward the high voltage resonance coils at the base of the mighty apparatus.

The slab vanished, but the body of the dawn man did not. Freed of its support it remained for an instant miraculously suspended in midair between the blinding flare of the oscillator coil in the cylinder and the crackling luminescence of the coils beneath.

Horror engulfed Kalu's stunned faculties as he stared at the incredible phenomenon. The dawn man was resisting an unheard of voltage with every atom of his incredibly sus-

pended being, retaining integrity of form despite a surge of energy sufficiently potent to blast a channel in the earth.

The resonance coils threw the searing energy projectiles back against the tube's mighty base, passing them through the wavering and suspended body of the dawn man in reverse. Kalu's heavy-lidded eyes bulged in their fleshy sockets. Something was happening to the suspended figure now, but it was not the anticipated blurring of dissolution.

The dawn man's body was slowly and hideously lengthening. It extended itself beyond the fiery electron volt discharge and then receded jerkily from its waist to its toes. The next instant it altered shockingly all over and all at once. It became a thing of incredible dimensions, of swiftly expanding and receding contours. Its lines and angles seem to dilate and coalesce at geometrically impossible tangents.

Presently it shed its unity. Staring in terror Kalu saw two distorted bodies suspended in the blinding flare of kinetic high-voltage. Then three bodies. Each horizontally suspended between the oscillator coils of searing radiance and each distorted incredibly.

KALU'S little shriveled hands clenched tightly. For seconds that seemed to lengthen into unimaginable eternities the three images remained horizontally afloat in the flame-wrapped void between the oscillators. Then they dimmed and vanished into nothingness.

Instinctively, in a kind of trance, Kalu raised his flaccid nerveless hand and shut off the searing, stupendous surge of radiations. As the crackling tube-flare dimmed to a misty flickering and then vanished he swayed a little in sick reaction; then sat without further movement. But though his wasted body remained quiescent his immense brain was engaged in the wildest speculations.

Something utterly unfathomable had occurred in the void between the immense cylinder and the oscillator coils. The dawn man had succumbed unmistakably to the terrific bombardment of radiant force. But something terrifying had occurred that he must tell Mool about. He must talk to Mool at once.

As he sat there white and shaken two tall Manuals entered the laboratory and advanced across the floor toward him. Their immense and supple hands were as infinitely complex and repulsive as the swollen, blue-veined heads of the Mentals. Millenniums of human specialization directed and conditioned by specialized techniques had endowed the Manuals with peculiar stigmata which limited their social functioning but enormously increased their efficiency as machine tenders.

Their hands were eight-digited, and so huge that they seemed to dwarf the bodies to which they were attached. As they approached the disc where Kalu was sitting their little, nearly hairless heads bobbed loathsomely about in the shadow of the high-voltage generator. Unobtrusively and in utter silence they started cleaning and oiling the vast array of coils, pistons and rotating mounts at the base of the immense machine.

KENNETH ARMSTRONG entered the Clark farmhouse through the kitchen, stopped a minute to help himself to a snack consisting of cold chicken wing and mince pie from the ice-box and then stamped down a long hall to the small sun-parlor where Corrine Clark was waiting for him. His heavy boots were mud-encrusted, and up above them as far as his chin there spread an expanse of very soiled, very faded denim.

Kenneth Armstrong looked like a rosy-cheeked country bumpkin fresh from his rustic rounds at eventide. His unruly hair and all-engulfing smock-like garment added a comic note. In his right hand he held a large red apple. Smiling broadly, he extended the apple toward Corrine Clark on his palm.

"For teacher," he said.

Corrine Clark smiled. She took the apple and dropped it into the pocket of her gingham apron.

"I don't want to eat that just now," she said. "I want to talk to you. Dad says you're a natural farmer. How do

you like helping with the chores?"

"It's one way of passing the time," said Armstrong, settling himself comfortably in the snug embrasure of a window seat and drawing his future wife down beside him. "But I won't pretend I don't miss the dangers and uncertainties of the spaceways. Somehow I feel as though I had actually left a part of myself out in space."

Corrine's smile increased in volume. "Really, what a strange notion."

"Yes, isn't it. But you know, I actually *did* pass through the vortex. Caxton confirmed that when I got him on the visual receptor again. And I've told you what a queer sensation I had when I passed through, how the little clocks multiplied and my body seemed to lengthen and shoot off in various directions. Well, just suppose—just suppose the vortex multiplied *me*, too. Now wait a minute until I explain.

"Suppose the atoms of our bodies, about which we know so little, could be multiplied indefinitely. When an amoeba divides we have two perfect amoebae, each exactly alike. For the sake of analogy, suppose my body were composed of millions of amoebae and that each of these little organisms decided to divide at a given instant of time. All together, you understand. Simultaneously, like a thunderclap. There'd be two *mes*, wouldn't there?

"Now, suppose that under certain conditions atoms can multiply by fission like single-celled organisms. Isn't it just barely conceivable that the vast complex of atoms composing my body would produce two identical *mes* if they all divided at the same time?"

"Whatever gave you such an idea?"

"The fact that the little clocks divided, I suppose. I got to thinking about that. The vortex isn't a solid body. We know that now. The fact that I passed completely through it has given the astronomers something to think about.

"Suppose the vortex is a sort of vacuum or negative flux of force in space where atoms just facilely divide by binary fission, just split up into complete new units impossible to distinguish as parents and offspring. Suppose that within the vortex the ordinary laws of physics are in abeyance.

"Something pretty strange happened to me inside the vortex. Perhaps the distortion which so frightened me, the sudden lengthening and swelling of my limbs was caused by another *me* popping off. Splitting up and popping off. Perhaps I was giving birth by fission to a kind of atomic ghost or twin.

"PERHAPS one of these fission-born replicas of the ship and myself popped right through the vortex and returned to Earth, while the other was sucked deep within its depths and carried into another time or another space. Perhaps somewhere in the depths of the vortex there is another Kenneth Armstrong—a Kenneth Armstrong composed of fission-born atoms—sharing all the thoughts and emotions, as well as the physical attributes of your future husband.

"I have often thought that if we were capable of disrupting the nucleus of an atom by high-voltage bombardment something extraordinary and totally unexpected might occur. It might disintegrate by exploding or it might simply split up into two or more identical shell-patterns or ghost atoms. It's a curious fancy, but perhaps if some force assailed the original integrity of an atom and stripped off one of its 'ghosts' it might be capable of giving off ghosts indefinitely, peopling the Universe with replicas of itself."

Corrine Clark laughed. "It's the craziest idea I've ever heard of," she said. "I can't imagine how you ever came to think of it."

"I expect it was just a wish-fulfillment fantasy," said Armstrong. "Every man likes to feel that he has a free untrammeled ghost psyche somewhere, a double that is not Earthbound."

Corrine Clark pouted.

"Earthbound! Oh, you wretch. So you want to be off and away."

"I didn't mean that exactly," said Armstrong. "If such a 'ghostly' Kenneth Armstrong exists, I wouldn't be in his shoes for anything."

Before she could protest or accuse him again he put his arms about her, drew her gently toward him and silenced her rebukes with kisses so fervent that they left her gasping.

Science Questions and Answers

THIS department is conducted for the benefit of readers who have pertinent queries on modern scientific facts. As space is limited, we cannot undertake to answer more than three questions for each letter. The flood of correspondence received makes it impractical, also, to promise an immediate answer in every case. However, questions of general interest will receive careful attention.

RADIATION IN PLANTS

Editor, Science Questions and Answers:

I have a plant, a hyacinth, whose root tips glow faintly in the dark. Is this only my imagination, or is there an explanation for it? Is it perhaps "cold fire"?

L. V.,
New York City, N. Y.

It is rather doubtful that the plant emits light of any sort. It may be due to particles of punk buried in the earth in which the plant exists, the "fox-fire."

The so-called "cold fire" or "cold light," as exhibited by fireflies, glow worms, light chafers, etc., is produced by the digestive processes in the body. It is a strictly chemical reaction whereby an enzyme (a ferment) acts upon a special secretion, to give out visible radiation.

This "bioluminescence" is far more efficient than mankind's electric lights. Many deep-sea fish have this natural lighting system, down where the sun never reaches.

The hyacinth mentioned above is a bulbous-rooted plant. By coincidence, however, another bulbous plant, the onion, is known to give off a strange radiation. It is not visible however, being in the ultra-violet range. Russian and German biologists have reported these rays, and claim that they are closely related to the life principle in some way, for other plants exposed to these radiations, faint though they are, tend to grow faster. Even bacteria grow faster under their influence. The phenomenon has not as yet been fully investigated.—Ed.

TIDAL CAUSES

Editor, Science Questions and Answers:

Does the moon produce the ocean's tides alone, or does the sun have an effect also? Are the waves caused in any way by the sun or moon?

A. O. K.,
Birmingham, Alabama.

Waves are not connected with tidal phenomena in any way. They are purely dependent on atmospheric and underwater conditions.

Ocean tides, occurring twice daily all over the world on all seacoasts, are a combination of the sun's and moon's gravitational effects. The moon, since it is so much nearer, undoubtedly has the most to do with them. "Flood-tides," the rise of tides, reach their highest ranges when the moon is new or full. In other words, when the moon and sun are in a line with Earth, thus exerting a greater combined influence. At full moon, when the Earth is between, the effect is nearly the same as when the sun and moon are both above. In the former case the sun and moon pull the tides upward at opposite sides of Earth. In the latter case, they pull at one end, and by the laws of mechanics, the other end rises of itself. When the moon is at its quarters, the tide is lowest (neap-tides), for the reason that sun and moon exert right-angular, opposing influences.

However, there are not two separate tides, one each for sun and moon. There is but one general tide. This is because the oceans act as complete entities under the influence of extra-terrestrial forces. The separate, and sometimes opposing, forces of sun and moon combine in the fluid oneness of an ocean to produce a mean (average) tidal effect.

Not only does the line-up of sun and moon (at new or full moon) produce greater tides (8 to 3 ratio), but even the moon's change of distance from Earth has its effect. At perigee (nearest position) the moon has a 20% greater effect on the tides.

Obviously, the high-water records occur when the new moon (on the same side as the sun) is at perigee.—Ed.

ORIGIN OF LIFE

Editor, Science Questions and Answers:

I have searched through some books but have never found the answer to this: after the earth cooled, how did life begin?

J. B.,
Chicago, Ill.

This is one of the enigmas of nature. One can only look over the various theories propounded on the question and take a choice. Kelvin, Helmholtz, Richter and Arrhenius believe life came from outer space in the form of spores or hardy germs embedded in meteorites, or wafted along in cosmic dust. Abiogenesis, or spontaneous generation, postulates that living cells arose from carbonaceous, colloidal slime activated by ferments. The theory of metallic photocatalysis presumes that metallic substances transferred the energy of light to carbonized water, forming formaldehyde, which in turn could con-

dense with ammonium nitrite (formed by the action of lightning on nitrogen in the air) to form nitrogen compounds, or amino-acids, which are the basis of protoplasm. The electro-chemical interpretation of life assumes that some mysterious radiation, perhaps the cosmic rays, acted on natural organic compounds such as nitrogenous oils to form the radiogens, the "spark of life."

The spore theory of Arrhenius is evasive; it does not explain where life started. Abiogenesis does not stand up since it has never been observed to happen in recorded times. Photosynthesis has been tried in the laboratory, with no worthwhile results, though nothing seems to be lacking. And the electrochemical theory falls short for all these reasons.

Thus the answer still is—"Who knows?"—Ed.

PETRIFACTION

Editor, Science Questions and Answers:

What exactly is petrifaction? I believe all fossils are a result of that process, but wonder how it happened.

J. L.,
Gary, Indiana.

Petrifaction is simply the substitution of the organic substance of once-living matter by the inorganic, atom by atom. As a molecule of wood or bone decays, a molecule of stone takes its place. This can only occur when the air, earth, or water surrounding the organic substance holds in solution some readily precipitated mineral. Also the decaying matter must not waste away too rapidly, or there will be no chance for deposition of minerals. Flesh, for instance, cannot petrify. Bone and wood are the most common examples, exemplified by fossils and petrified forests.

If it weren't for the phenomenon of petrifaction, we would be totally ignorant of evolution and all previous life, for our entire groundwork of the study of the past is in fossils. Limestone caverns, pitch pits, stagnant pools, sudden avalanches, etc., have preserved for us a record of the past, buried under heaps of dirt and stone. Petrifaction has left for us, in enduring stone, a surprisingly detailed story of the long past.—Ed.

WHERE DOES LIGHT GO?

Editor, Science Questions and Answers:

You will probably consider this a scientific "poser," but what happens to the light of the stars? If it goes on and on, it must eventually reach the end of space, if there is an end, and then what?

S. W.,
Dallas, Texas.

We will attempt to answer this question by analogy. We cannot presume to know more than the cosmogonists, who readily admit they have found no end to the universe so far. The late school of astro-physicists talk of a finite, yet boundless space. Einstein talks of curved space, and the eventual return of a light ray after many eons upon eons.

However, it is likely that a light ray has no chance to reach an "end" or come back to the beginning. This is presumed from the evidence that our galaxy, in common with many others, is enveloped in nebulous material which is able to scatter light and eventually absorb it. The nebulosity is not visible to us, it is so fine and tenuous. The spectroscope gives evidence of its existence in that the bulk of nearer stars have on the average a more reddish spectrum. This means refraction and absorption of starlight coming to us, and that means some medium causing it, which is probably nebular matter.

Other things point to this supposition. The "zodiacal light," which is a background to the sun's corona in an eclipse, may be reflection from this material. Again the "Gegenschein" or counter glow, opposite the new moon, may be the sun's reflection on this backdrop of wispy nebulosity.

It used to be thought, in connection with this, that as we reached out some 100,000 light years with our telescopes, the stars got thinner and thinner, and that perhaps ten or more times that far away was blank space. The present belief is that it is not a lack of stars but the scattering and absorption of these weak rays in our own nebulous veil which surrounds us. It has even been conjectured that if our eyes were not hindered at all—if space were absolutely clear—the sky would be almost a continuous blaze of light from the countless suns and galaxies in the limitless universe.—Ed.

BALL LIGHTNING

Editor, Science Questions and Answers:

What is the "lightning ball"? A friend of mine claims to have seen one. He said it climbed down a tree, like a squirrel, ripped half the bark off, then exploded on the ground with a loud noise.

E. W.,
Binghamton, N. Y.

The lightning ball is one of Nature's greatest freak phenomena. Its occurrence is so rare, and authentic reports so few, that next to nothing is known of it beyond the fact that it is an electric charge and can do considerable damage.

They seem always to float lightly, as though independent of gravitation, and in some cases do quite a bit of bouncing around, especially inside a house. One more or less authentic account describes an eight-inch lightning ball coming down the chimney and floating around in the room six feet off the floor for a while. Then it fell to the floor, rolled against the wall, went through it by the simple process of tearing a hole, and exploded out in the yard, making a two-foot depression in the wet ground.

The lightning ball must be classified as static electricity, somehow stored as a charge without the usual convenience of a Leyden jar or condenser. Its erratic, counter-gravitational behavior may be due to repulsion effects of Earth's magnetic field. Being perhaps a cloud of electrons, it would have no appreciable weight.—Ed.

IN this department we shall publish your opinions every month. After all, this is YOUR magazine, and it is edited for YOU. If a story in THRILLING WONDER STORIES fails to click with you, it is up to you to let us know about it. We welcome your letters whether they are complimentary or critical—or contain good old fashioned brickbats! Write regularly! As many of your letters as possible will be printed below. We cannot undertake to enter into private correspondence.

WESSO WANTED

By James V. Taurasi

I have just finished the April issue of T. W. S. and here is what I think of it.

The cover: Swell. This cover is the best you have yet put out. Only please do not spoil it by all that printing.

The stories: You are coming along very good on your selection of stories. They show a great improvement over your first issues. The best story in this issue is "Elixir of Doom" by Ray Cummings. Mr. Cummings has always been my best liked writer and it sure is great to have him back. How about getting Harl Vincent, another great writer, for us? Next in line comes "The Astounding Exodus" by Neil R. Jones. He is a writer who can always give you adventure and science in his stories. The only story of his I did not like was "Little Hercules." The rest of the stories rank as follows: "The Invincible Midge," "The Judgment Sun" and "Flight of the Silver Eagle."

Zarnak: There seems to be a miniature war going on about this cartoon strip. My stand is: the story is too juvenile and carries a familiar theme—but the drawing is very good. Why not have the artist illustrate for some of the stories?

Inside illustrations: Marchioni seems to be doing a fair job of it, but since you have Wesso illustrating Scientifacts, why not the stories? I think Wesso is one of the best science fiction illustrators.

Keep up the good work, and when are you going monthly?—137-07 32 Avenue, Flushing, New York.

(An illustration by Wesso in this issue. More coming!—Ed.)

A LONG CHAPTER

By Amelia Reynolds Long

I am herewith making a one hundred per cent rating on the keeping of New Year's resolutions; namely, applying for membership in the Science Fiction League. Incidentally, it is one of the things that I have intended doing for a long time; but with a procrastinating disposition like mine, it always seemed to get side-tracked. It does seem a trifle ridiculous that one who claims to be a science fiction writer (God and the editors willing) should not seize the opportunity to join science fiction's own organization.

My congratulations to the new management of WONDER for restoring it to its full stature. It seemed for a time to be on a too strenuous reducing diet. However, I would like to see a few more stories on biochemistry and its related subjects.

Is there by any chance a chapter of the Science Fiction League in my locality, with which I could become affiliated? If there is not, would it be out of place for a female member of an organization so nearly stag to offer to organize one?

Best wishes for the League's continued progress and expansion.—2036 N. Fifth Street, Harrisburg, Pennsylvania.

(We are gratified by the interest of Miss Long, a popular writer of science fiction, in T.W.S. All readers residing in her vicinity are urged to write to Miss Long for details concerning the formation of a Chapter.—Ed.)

HE LIKES ZARNAK

By Lawrence Harrison

I am just a tramp mechanic with no steady job or address, but I have a great liking for science fiction; have been reading it since 1924 in one form or another, and since the advent of T. W. S. have not missed a copy even though the town I might happen to be working in didn't have a news or magazine dealer.

Every story so far has been well worth the time necessary for reading—but these readers who want to change the mag and drop certain departments are in the minority. Those of us who are satisfied seldom if ever write in about anything—I am dissatisfied now; that is why I write.

Some, I notice, rave on and on wanting serials. It's too far between issues for that type of story.

What is wrong with these Zarnak knockers? It is good illustrated science fiction—but everyone doesn't appreciate the difficulty of illustrating things that are beyond the common readers' experience. More power to this author.

If you want to make a change in anything, just give Max Plaisted a couple more pages

to work on, and add a column to The Reader Speaks to list the names of his knockers.

I always read Zarnak first.—Marshalltown, Iowa.

—AND HE DOESN'T!

By Alva Thomson

I have just finished reading the April issue of T. W. S., and I must say it's great. The cover illustration was excellent, and so was the story portrayed, "Wanderer of the Void." You asked what kind of plot Zarnak should be given. I think a nice 6 x 3 plot, in the corner of a remote cemetery. "The Judgment Sun" was a fine story. "The Invincible Midge" had a new twist and Paul Ernst is to be congratulated. This is the first magazine I have found worth writing to.—206 West 52nd Street, New York City.

WHAT A WRITER THINKS OF S-F FANS!

By Arthur J. Burks

Here is something that may interest you. Last night I was guest speaker at—guess what? Los Angeles Chapter No. 4 of the Science Fiction League, fathered, I believe, by you'ns. And if anybody impugns the intelligence of pulp readers again, advise me right away and I'll sock 'em in the nose. These youngsters, ranging in ages from twelve to sixty, are keen as hell. What they don't know about science, today and tomorrow, hasn't been written yet. I suggested we might think up a story for me to write for T. W. S., and one youngster suggested a time traveling story, where the hero goes BACKWARD into the future, that sounded like a honey. It may be too tough for me to write, but I'll probably try it later. They get together twice a month, and they're rabid fans. One lady asked me if I thought science stories too trashy for young folks to read, and the rest of 'em sort of snowed her under before I could answer, though I tried my best. I recommended 'em. They wanted to know all about covers, and black and white drawings, and a lot of other things I couldn't tell 'em. Tell your writers to take a tip if they are ever asked to talk at this League of your'n: to have all the answers at their fingertips, for these buzzards KNOW.

Forrest J. Ackerman, a fashion-plate of twenty or so, asked me over and sprung me as a surprise on 'em. Reeled off the titles of stories I had done during the past ten years. Someone asked me about one I'd published about ten or eleven years ago. So, thinks I, they don't forget, so it sort of behooves us scribblers and publishers to stick close to these'ns. They do everything but eat the covers when the mags come out. They have stills from the latest fantastic pictures, and, boy, do they rip movie boners apart! What I mean is, they're darned serious about the League, its future, what the mags are doing and going to do. If there's anything in the mags they miss, I don't know what it is. They even had copies of American Magazine twenty-four years old, wherein there was a serial called "Angel Island."

They meet in the Little Brown Room of the Clifton Cafeteria, 648 South Broadway, and as I said before, they're keen, and they know all the answers—especially the ones you don't know, darn 'em. 868 South Harvard Boulevard, Los Angeles, California.

(We know Arthur J. Burks never intended this letter for publication. But we found it so interesting that we think it belongs right here in The Reader Speaks. And here's hoping the Los Angeles Chapter can coax Burks into turning out a novelette for us.—Ed.)

ADVENTURE ELEMENT LIKED

By P. Burgess

I have read the December and February numbers of your new magazine, and, having noted your request for letters from readers airing their opinions, etc., I am writing in accordingly. I must congratulate you on your fine line-up for the above two numbers. I think you have here the makings of a first-class magazine so long as you do not allow your writers to get too technical in their writings. The stories in the two numbers I have so far perused are mostly A-1, a nice spice of adventure and enough but not too much science. Having been a reader off and on the old WONDER, I am glad to see the *new* THRILLING WONDER STORIES and consider it in every way a marked improvement on the old.

The December number was O. K. The cover was good, whoever your cover artist may be, and Marchioni was at his best with the inside work. Try and get Paul to help Marchioni sometimes to add variety to the style. The stories were fine. I particularly enjoyed "The Lanson Screen," by Zagat; "Mutiny on Europa," by Hamilton; "The Island of Dr. X," by Echols; "Saturn's Ringmaster," by Gallun; "Earth-Venus 12," by Wilson; Cummings' "Trapped in Eternity"; Weinbaum's "Brink of Infinity," and Campbell's "Brain Stealers of Mars" were also pleasing yarns.

In the February number, the cover is good and the inside illustrations O. K. "Black Fog," by Wandrei, was in my opinion far and away the best of the short stories, with "The World in a Box," by Jacobi, next. "The Seeing Ear" was fair and "He Who Masters Time" good till the last page, when it became rather dull. "Brain of Venus," "Invaders from Outer Suns," "The Ice Entity" and "Protoplasmic Station" were all enjoyable reading.

I am pleased to see Ray Cummings back in science fiction. Get him to give us a serial in the near future—something like that excellent four-parter, "Wandl, the Invader," or a novelette on similar lines. I should also like to see an occasional story by Charles W. Diffin, S. P. Meek, Harl Vincent, Miles J. Breuer, Clifford D. Simak, Sewell Peaslee Wright, Edwin K. Sloat, R. F. Starzl, H. G. Winter, Clark Ashton Smith, Manly Wade Wellman, and Anthony Gilmore. Why not try and get Gilmore to do us some of his

famous "Hawk Carse" stories? Also try and get Wright to come back with his "John Hanson" yarns. I think that with the acquisition of these two authors writing these particular stories you would ensure yourself the support of all the "Hawk Carse" and "John Hanson" fans. You could at least try out the idea for what it's worth.

Don't take too much notice of those readers who clamor incessantly for more and still more science in the stories. Every reader who peruses science fiction is not necessarily a scientific crank. There must be a number of people who, like myself, read science fiction for relaxation from the common type of fiction such as westerns, detective, love, etc.—in other words, people who read science fiction because it is DIFFERENT and offers a spice of variety. Too much science in stories tends to make them dry and difficult to read for persons who do not have too good a knowledge or understanding of scientific matters. So please don't let T. W. S. follow the example of another magazine, which has practically sacrificed the adventure element in its stories on the altar of science, with the result that the stories, though fairly good on the whole, are still not so good as they formerly were.

I don't care for "Zarnak" and shall be glad to see the end of it, and hope that when "Zarnak" is finished these pages will be used for story matter.

There is one thing I find lacking in interplanetary stories of late years. Atmosphere! These tales seem utterly devoid of the suggestion of sheer vastness, of the soul-sickening loneliness of infinite space; of the sense of utter isolation from the Earth and remoteness from everything familiar to Earthmen. Interplanetary tales are written with too much matter-of-factness, as though such things are an accomplished fact. In these tales the planets are always already settled by Terrestrials with Government bases on each; the spaceways marked out and well-traveled; there is no sense of isolation from Earth or the remoteness of the distant planets. Edmond Hamilton had the right idea when he mentioned the same matter in his "Story Behind the Story" article in the December T. W. S.

Wishing you success during the coming year!—246 North Lane, Aldershot, Hants, England.

FALLACIES IN SCIENCE FICTION

By Lloyd W. Sharp

I am accepting your invitation to express a reader's opinion of your magazine; but since, at the same time, I aspire to a place among your writers, perhaps it behooves me to tread cautiously in the course of my criticisms. Here goes:

The men who write for T. W. S. seem to be a rather capable lot, and furnish really good entertainment, albeit at the cost of an occasional scientific inaccuracy. But then, Campbell has little respect for the musts and

(Continued on page 120)

come back Bigger, Uglier

— unless removed Root* and All

●A corn goes deep. When you cut or pare it at home the root remains imbedded in the toe. Soon the corn comes back bigger, uglier—more painful—than ever.

Why suffer! Use the Blue-Jay double-action method. Pain stops instantly by removing the pressure. Then the entire corn lifts out Root and All.

Get a package of Blue-Jay today. 25¢ for a package of 6.

BLUE-JAY

BAUER & BLACK

SCIENTIFIC CORN PLASTERS

*A plug of dead cells root-like in form and position. If left may serve as focal point for renewed development.

SONG POEMS

WANTED AT ONCE! Mother, Home, Love, Patriotic, Sacred, Comic or any subject. Don't delay — send best poem today for our offer. RICHARD BROS., 74 Woods Bldg., CHICAGO, ILLINOIS

Exciting Stories of Federals in Action In

G-MEN

—Featuring—

DAN FOWLER

At All Stands—Price 10c

When Poisons Clog KIDNEYS and Irritate Bladder

JUST DO THIS

Go to your druggist today and get this safe, swift and harmless diuretic and stimulant—ask for Gold Medal Haarlem Oil Capsules and start at once to flush kidneys of waste matter saturated with acids and poisons.

That's the way to bring about healthy kidney activity and stop that bladder irritation which often causes scanty passage with smarting and burning as well as restless nights.

Remember, the kidneys often need flushing as well as the bowels, and some symptoms of kidney weakness are: Getting up once or twice during the night—puffy eyes—cramps in legs—backache and moist palms. But be sure and get GOLD MEDAL Haarlem Oil Capsules—the original and genuine—right from Haarlem in Holland—the price is small (35 cents), the good results will fulfill your expectations.

BE A RAILWAY TRAFFIC INSPECTOR WRITE TODAY

BUS AND RAILWAY LINES ARE ASKING US FOR MEN

ACTIVE, RELIABLE MEN—19 to 50—are placed as Railway and Bus Passenger Traffic Inspectors upon completing our home-study course which trains you in a few weeks. Earn up to $135 per month to start, plus expenses; advance rapidly with experience. Our record: 18 yrs. of placing our graduates. Write STANDARD BUSINESS TRAINING INSTITUTE, Div. 8506, Buffalo, N. Y.

FISTULA

Anyone suffering from Fistula, Piles or any Rectal trouble is urged to write for our FREE Book, describing the McCleary Treatment for these treacherous rectal troubles. The McCleary Treatment has been successful in thousands of cases. Let us send you our reference list of former patients living in every State in the Union. The McCleary Clinic, 697 Elms Blvd., Excelsior Springs, Mo.

POEMS SET TO MUSIC FREE examination.

SEND YOUR POEMS TO J. CHARLES McNEIL

Bachelor of Music, 4153-TF South Van Ness, Los Angeles, Calif.

ROOFLESS Plates

ORDER BY MAIL AT MONEY SAVING PRICES

FREE! Sanitary Wrapped Impression Material

SEND NO MONEY!

These Plates are Held Firmly by Vacuum Cup Suction. Restores Natural Voice and Facial Expression. Don't Delay. Write Today. Send Name and Address for Information.

60 DAYS TRIAL

Dr. J. S. LIPPERT

Plate Specialist with 33 years' experience

Dept. 330-N, 24 E. Van Buren St., Chicago, Ill.

(Continued from page 119)

mustn'ts of orthodox science, and he is one of my favorites.

Inconsistency with fact is the thing I am saddened most to see: time-travelers occupying two places at the same time—making gold from nothing in defiance of the thoroughly proven Einstein relation ($M = C^2$) —impenetrable screens of energy with ships sticking through them—cathode rays traveling long distances through air as de-phased "static." These things damage the good name of science fiction to an extent that can hardly be estimated. It is especially sad because the damage is wanton. (Tsk! If you found similar inconsistencies in a story of mine, would MY face be red!)

I can appreciate the difficulty you have had in getting suitable material for your magazine, what with the classical well of Verne, Poe, Wells, Weinbaum, and Burroughs having run practically dry. Men with imagination, replete with scientific knowledge, and possessed of an agile pen-arm, are few and far between. I sincerely hope that you will have better luck in searching them out henceforth than you had in the past few years.

Mr. Mallory's suggestion for a series of articles on telescope-making might be all right, but it would be needless repetition, since the Scientific American has had that situation well in hand for years. Warning: the telescope-making bug is a disease of uncontrollable virility, and once started will usurp pages and pages of your magazine. I speak as one who has been bitten hard himself, so hard that a concrete base and a Ford rear axle are needed to support the monster.—Box 424, Concrete, Washington.

T. W. S. IS O. K. WITH HIM

By Robert Sherk

Before giving my opinion of the stories in the April issue I wish to say that each copy of T. W. S. is far better than the previous one. The stories seem to contain a certain something that is lacking in other mags.

The best story was "Flight of the Silver Eagle," by Arthur L. Zagat. He is your finest and most consistently good writer—hold on to him. Second best was Dr. Arch Carr's little gem, "Wanderer of the Void." This held my interest from the beginning by the inimitable style of the author. Keep up the high standards that you have set up in this issue!—119 Folger St., Buffalo, N. Y.

A HAGGARD FAN

By R. A. Squires

All in all I was quite pleased with the February issue. Keep improving at this rate and by the end of the year—well, who can tell what the future will bring?

This letter was really inspired by Mr. Haggard's story, "He Who Masters Time." In fact, I liked it so much that I wrote to the author and personally thanked him for it. Every once in a while a story appears

that shows an error in all other stories of the same type. And this was one of them. No other author has ever, to my knowledge, considered the expanding universe in his time travel tales.

The forecast for the next issue looks very good. Binder and Jones are among the best authors science fiction has to offer.

Here's wishing you the best of luck.—1745 Kenneth Road, Glendale, California.

CRITICISMS

By Milton A. Rothman

The February issue of WONDER is certainly an improvement over the first issue. And you have at least one improvement over the old WONDER. I find that the answers in Science Questions and Answers are much better than they formerly were. The Story Behind the Story Department is also a welcome innovation. However, that cartoon, "Zarnak," is utterly worthless. There's too long a wait between episodes, and the story itself is juvenile trash.

The best story in the issue is by an old-timer, John Scott Campbell. His name brings back memories of the dead past, and stories like "The Infinite Brain" and "Beyond Pluto." Incidentally, I am still mad at Campbell for not giving us that much awaited sequel to the latter story.

The other stories were good. Since you are fast set upon your policy, I suppose I cannot change it. But since most of the best science fiction stories have been novels, you are losing out on them by not printing serials.

About the cover. As art it is not so hot. That mass of green representing a brain is horrible. And the colors are a bit unattractive. But the expressions on the faces are the best I have ever seen on any cover. —2113 N. Franklin Street, Philadelphia, Pennsylvania.

GUIDE TO SCIENCE KNOWLEDGE ANSWERS

(See Page 86)

1—Page 17, in MENACE FROM THE MICROCOSM

2—Page 35, in THE MOLTEN BULLET

3—Page 57, in DARK SUN

4—Page 66, in DARCONDRA

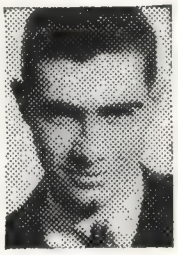
5—Page 75, CHESSBOARD OF MARS

6—Page 90, in RENEGADE

7—Page 93, in GREEN HELL

8—Page 94, in GREEN HELL

9—Page 114, in THE BLACK VORTEX



$50 for a Story

"I am glad to tell you that I have been progressing rapidly with my course and have been able to dispose of a few stories and articles. My last story was sold to Outdoor Life and brought me $50."

CYRIL E. GROZELLE,
Box 418, Haileybury,
Ontario, Canada.

How do *you* know *you can't* WRITE?

Have you ever tried?

Have you ever attempted even the least bit of training, under competent guidance?

Or have you been sitting back, as it is so easy to do, waiting for the day to come when you will awaken, all of a sudden, to the discovery, "I *am* a writer"?

If the latter course is the one of your choosing, you probably *never will write.* Lawyers must be law clerks. Engineers must be draftsmen. We all know that, in our times, the egg does come before the chicken.

It is seldom that any one becomes a writer until he (or she) has been writing for some time. That is why so many authors and writers spring up out of the newspaper business. The day-to-day necessity of writing—of gathering material about which to write—develops their talent, their background and their confidence as nothing else could.

That is why the Newspaper Institute of America bases its writing instruction on journalism—continuous writing—the training that has produced so many successful authors.

Learn to write by writing

NEWSPAPER Institute training is based on the New York Copy-Desk Method. It starts and keeps you writing in your own home, on your own time. Week by week you receive actual assignments, just as if you were right at work on a great metropolitan daily. Your writing is *individually* corrected and constructively criticized. A group of men, whose combined newspaper experience totals more than 200 years, are responsible for this instruction. Under such sympathetic guidance, you will find that (instead of vainly trying to copy some one else's writing tricks) you are rapidly developing your own distinctive, self-flavored style—undergoing an experience that has a thrill to it and which at the same time develops in you the power to make your feelings articulate.

Many people who *should* be writing become awe struck by fabulous stories about millionaire authors and, therefore, give little thought to the $25, $50, and $100 or more that can often be earned for material that takes little time to write—stories, articles on business, fads, travels, sports, recipes, etc.—things that can easily be turned out in leisure hours, and often on the impulse of the moment.

A chance to test yourself

We have prepared a unique Writing Aptitude Test. This tells you whether you possess the fundamental qualities necessary to successful writing—acute observation, dramatic instinct, creative imagination, etc. You'll enjoy taking this test. The coupon will bring it, without obligation. Newspaper Institute of America, One Park Avenue, New York.

Free

Newspaper Institute of America
One Park Avenue, New York

Send me, without cost or obligation, your *Writing Aptitude Test* and further information about writing for profit.

Mr. }
Mrs. } .....
Miss }

Address .....

(All correspondence confidential. No salesman will call on you.)

94F367

The SCIENCE FICTION LEAGUE

A department conducted for members of the international SCIENCE FICTION LEAGUE in the interest of science fiction and its promotion. We urge members to contribute any items of interest that they believe will be of value to the organization.

EXECUTIVE DIRECTORS

FORREST J. ACKERMAN
EANDO BINDER
JACK DARROW
EDMOND HAMILTON
ARTHUR J. BURKS
RAY CUMMINGS
RALPH MILNE FARLEY
WILLIS CONOVER, JR.

SCIENCE fiction enthusiasts take it more or less for granted that other planets are inhabited, but modern research has given us no definite and undisputed evidence of intelligent life on any world save the Earth.

The giant planets, we are told, have not yet attained to the life-supporting period, while on Mercury life seems improbable. Although Mars and Venus favor the presence of intelligent beings, there is no evidence that such life exists.

Does that mean we represent the only intelligent life in the universe? The stupendous egotism of such a conclusion bids us pause.

But we may reasonably a r g u e against it.

AN ASTRONOMER'S ARGUMENT

Space is strewn by millions of suns, any of which may have its system of planets. In this connection, we may quote the argument of a famous astronomer on the mathematical theory of probabilities.

Imagine a heap of one million grains of corn—all white except one, which is red. If a man, blindfolded puts out his hand and takes one grain from the heap, what are the chances that he will pick the red grain, all grains supposedly equally accessible? Just one in a million!

Were death the penalty for the choice of the red grain, no sensible man need hesitate to put forth his hand under such conditions. But march the 1,500 millions of mankind past this heap, each blindfolded, taking up and dropping again one grain, and it is certain that 1,500 will pick the red grain.

Let us assume for one moment that there are suns in space with attendant planets, and make the chances one in a million that the conditions to support intelligent life are found on any planet.

With practical assurance we may then pick out any star at random and say that no life exists in that system. But with even greater certainty we may affirm that, among the thousands of millions of suns, there are thousands which have their retinue of worlds as fitted for life as is our Earth.

GREAT STORIES TO COME!

This month we are introducing the first of Jack Binder's series of scientific speculations in his strip, IF! and there will be another installment next issue. Will you write and let us know what you think of the feature?

The new T. W. S. is going into its second year with the next issue. Great things are planned for the forthcoming numbers. Remember Ray Cummings' famous old character, "Tubby"? He'll be back soon, in a new story by this popular writer. And next month Edmond Hamilton appears with a character we're certain will appeal to you—Crane of the Terrestrial Secret Service.

More features? Sure—an article on

the problems of space flying next month, by P. E. Cleator, the British authority. It's brief and to the point, accompanied with many interesting illustrations. And there are more to come—if you like them!

JOIN THE LEAGUE

Join the SCIENCE FICTION LEAGUE! It's a world organization for followers of science and science fiction — and it fosters that intangible bond between all science fiction readers. Just fill out the application coupon on Page 128.

Members and chapters are everywhere, in all parts of the globe. They correspond with one another, have regular meetings, exchange reading material.

To obtain a FREE certificate of membership, tear off the name-strip on the cover of this magazine, so that the title of the magazine and the date show, and send it to SCIENCE FICTION LEAGUE, enclosing a stamped, self-addressed envelope. We will forward you, in addition to the certificate, further information concerning LEAGUE activities.

Everybody — fans and followers — write the editor of THRILLING WONDER STORIES a letter every month! We want all your opinions, suggestions and criticisms. They really help us!

THE SCIENCE FICTION LEAGUE

—a department conducted for members of the international Science Fiction League in the interest of science, science fiction and its promotion. We urge members to contribute any items of interest that they believe will be of value to the organization.

There are thousands of members in the League with about forty chapters in this country and abroad, and more than that number in the making all over the world. An application coupon for readers who have not yet joined will be found in this department.

FOREIGN CHAPTERS

Leeds Science Fiction League (Chapter No. 17). Director, Douglas W. F. Mayer, 20 Hollin Park Rd., Roundhay, Leeds 8, Yorkshire, England.

Belfast Science Fiction League (Chapter No. 20). Director, Hugh C. Carswell, 6 Selina St., Belfast, Northern Ireland.

Nuneaton Science Fiction League (Chapter No. 22). Director M. K. Hanson, % Mrs. Brice, Main Road, Narborough, Leicestershire, England.

Sydney Science Fiction League (Chapter No. 27). Director, W. J. Osland, 26 Union Street, Paddington, Sydney, N.S.W., Australia.

Glasgow Science Fiction League (Chapter No. 34). Director, Donald G. MacRae, 36 Moray Pl., Glasgow, Scotland.

Barnsley Science Fiction League (Chapter No. 37). Director, Jack Beaumont, 30 Pontefract Road, Barnsley, Yorkshire, England.

OTHER CHAPTERS

There are other domestic Chapters of the LEAGUE, fully organized with regular meetings, in the following cities. Addresses will be furnished upon request by Headquarters to members who would like to join some local branch. Chapters are listed chronologically according to Charter:

Lewiston, Ida.; Erie, Pa.; Los Angeles, Calif.; Monticello, N. Y.; Mayfield, Pa.; Lebanon, Pa.; Jersey City, N. J.; Lincoln, Nebraska; New York, N. Y.; Philadelphia, Pa.; Oakland, Calif.; Elizabeth, N. J.; Chicago, Ill.; Tacoma, Wash.; Austin,

(Continued on page 124)

Sensational BARGAINS

Guaranteed $102.50 Model *NOW Only* $44.90 Cash or On Easy Terms

SMALL CARRYING CHARGE

10 Day Trial

No Money Down

Fully GUARANTEED

Positively the greatest bargain ever offered. A genuine full sized $102.50 office model refinished Underwood No. 5 for only $44.90 (cash) or on easy terms. Has up-to-date improvements including standard 4-row keyboard, backspacer, automatic ribbon reverse, shift-lock key, 2-color ribbon, etc. The perfect all purpose typewriter. Completely rebuilt and FULLY GUARANTEED.

Learn Touch Typewriting Complete (Home Study) Course of the famous Van Sant Speed Typewriting System — fully illustrated, easily learned, given during this offer.

MONEY BACK GUARANTEE

Send coupon for 10-day Trial —if you decide to keep it pay only $3.00 a month until $49.90 (term price) is paid. Limited offer — act at once.

INTERNATIONAL TYPEWRITER EXCHANGE
231 West Monroe St., Chicago, Ill., Dept. 688.
Send Underwood No. 5 (F. O. B. Chicago) at once for 10-days' trial. If I am not perfectly satisfied I can return it express collect. If I keep it I will pay $3.00 a month until I have paid $49.90 (term price) in full. For quick shipment give references and occupation.
Name..... Age.....
Address.....
Town..... State.....

High School Course at Home

Many Finish in 2 Years

Go as rapidly as your time and abilities permit. Course equivalent to resident school work — prepares you for entrance to college. Standard H. S. texts supplied — Diploma. Credit for H. S. subjects already completed. Single subjects if desired. High school education is very important for advancement in business and industry and socially. Don't be handicapped all your life. Be a High School graduate. Start your training now. Free Bulletin on request. No obligation.

American School, Dpt. HA58, Drexel at 58th, Chicago

Newly Discovered Hormone Helps Men Past 40

It's a hormone used by many doctors here and abroad to strengthen impaired vigor caused by weakened glands. This hormone, together with other beneficial ingredients, is obtained in Zo-ak Tablets (Blue Box for Men—Orange Box for Women) at all good druggists. Try them uninterruptedly for one month. If you do not feel vastly improved your druggist gives you your money back. Don't accept a cheaper substitute. Zo-ak contains the genuine gland-stimulating hormone. No harmful drugs. Booklet by registered physician free. Zo-ak Co., 52 W. 45th St., N. Y.

SOOTHE KIDNEYS with real santalwood oil

When the genito-urinary passages become irritated, don't use cheap drastic medicines. Tell your druggist you want genuine Santal Midy Capsules. Used by millions. They contain true East Indian santalwood oil.

Visible Pimples and Blackheads, Freckles Ugly Large Pores and Wrinkles Disappear!

You thought this impossible, but now you can have a clear, blemish-free, new outer skin IN 3 DAYS. Look clean, healthy, years younger and beautiful, this new, harmless, economical way. Learn about it FREE!

It is all explained in a new free treatise called **"BEAUTIFUL NEW SKIN IN 3 DAYS"** which is being mailed absolutely free to readers of this magazine. So worry no more over your humiliating skin and complexion or signs of aging if your outer skin looks soiled and worn. Simply send your name and address to **MARVO BEAUTY LABORATORIES**, Dept. 75-E, No. 1700 Broadway, New York, N. Y., and you will receive this new treatise by return mail in plain wrapper, postpaid and absolutely free. If pleased tell friends.

SAFE AND HARMLESS

Ball Cartridges cannot be inserted; Shoots 22 blanks only. Construction and finish same as high-grade fire-arms. No permit required. For starting races, theatricals, training dogs, etc.

8 Shot Blank Revolvers, double action 22 cal. $4.95
8 Shot Blank Revolvers, 22 cal. D. A., pearl stocks $5.95
6 Shot Blank Automatic, 22 cal. jiffy ejector..... $4.45
100 Blanks FREE with each, Extra Cartridges, per 100..... .50

$2 Deposit required on C. O. D.'s.

Badges: Private Detective, Sheriff, Special Police, Private Watchman, etc.—**Nickel, 85c. Gold Pltd., $1.45.**

Bargain Catalog: S&W, Colts, Rifles, Police Goods, Telescopes, Binoculars, Holsters, Belts, etc. Send 3c stamp.

LEE SALES CO., (Dept. GX) 35 W. 32nd St., NEW YORK CITY.

WANTED ORIGINAL POEMS, SONGS

For Immediate Consideration . . . . . Send poems to **Columbian Music Publishers, Dept. 30, Toronto, Can.**

BECOME A SUCCESSFUL

FINGER PRINT EXPERT

Prepare for a Thrilling Career with a splendid, steady income. Write for Free Publication and Particulars. **NATIONAL INSTITUTE, Dept. E, Fremont, Nebraska**

A BABY FOR YOU?

If you are denied the blessing of a baby all your own and yearn for a baby's arms and a baby's smile do not give up hope. Just write in confidence to Mrs. Mildred Owens, Dept. Y, 532 Hanan Bldg., Kansas City, Mo., and she will tell you about a simple home method that helped her after being denied 15 yrs. Many others say this had helped bless their lives. Write now and try this wonderful happiness.

Blood-Chilling Stories

In Every Issue of

THRILLING MYSTERY

10c—At All Newsstands

(Continued from page 123)

Tex.; Millhiem, Pa.; Bloomington, Ill.; Newark, N. J.; Stamford, Conn.; Denver, Colo.; Lakeport, Calif.; Ridgewood, N. Y.; Woodmere, N. Y.; Beckley, W. Va.; Tuckahoe, N. Y.; South Amboy, N. J.; Pierre, S. Dak.; Albany, N. Y.; and Boonton, N. J.

CHAPTER NEWS AND GENERAL ACTIVITIES

PHILADELPHIA CHAPTER

The Philadelphia Chapter of the SFL met, as always, at the home of Milton A. Rothman, Chapter Director. Dierctor Rothman, assisted by two or three others, gave an account of the S-F Convention doings for the benefit of those who had not attended.

Willis Conover, Jr., was present at the meeting. He read aloud two articles scheduled for an early appearance in Science-Fantasy Correspondent, the S-F fan magazine. The first of these items was Thomas S. Gardner's **A Critique of Science Fiction,** which discusses the various science-fiction magazines—their merits and faults—in an entirely new and highly interesting manner.

Plans were made to purchase a mimeograph machine with which to publish the Chapter magazine, the Fantasy Fiction Telegram. Several new League members joined the Chapter; and Exec. Dir. Conover was appointed an honorary member of the Philadelphia Chapter.

Meetings are held every other Saturday evening at Director Rothman's residence, 2113 N. Franklin Street. All readers of imaginative fiction in the immediate vicinity are cordially invited to attend, or to communicate with Mr. Rothman at the above address for further information.

MINNEAPOLIS CHAPTER

At the preliminary meeting of the Minneapolis Chapter of the Science Fiction League, held recently, members present were: Oliver E. Saari, who was elected temporary Director; Douglas Blakely, assistant director; John Chapman, secretary; Robert Madsen treasurer; Russell McKinnon; Arden Benson; Vern Winkelman; and Jack Burgess.

Honorary guests present at this meeting were Mr. Donald Wandrei and Mr. Carl Jacobi, well known science-fiction authors, who gave interesting talks on various sidelights of fantasy fiction.

SFL members in the Twin Cities, who are interested in joining this chapter, please get in touch with Oliver Saari, 1427 Logan Avenue North, Minneapolis, Minn.

ENGLAND—CHAPTER 37

Jack Beaumont, Director of Chapter 37, in England, reports:

"We now total six, and a few outsiders, and we meet regularly and discuss science and science fiction. We are in touch with all the other S-F fans here in England, and many in other countries.

"Our aim is to build a 'laboratory-library hut' in which each member may exercise his talent and ideas in a practical manner. We have, like most other Chapters, a library—rather modest, yet to us—of great value and interest, but up to now we are each taking care of his own collection and hope to have them all together in the near future. Anyone wishing information from any of our members concerning our activities is urged to get in touch with our secretary, R. Winder, or our medical instructor, D. Slade—30 Pontefract Road, Barnsley, Yorkshire, England."

NEW MEMBERS

UNITED STATES

B. Sloane, 1427 2nd No., Seattle, Wash.; Bob Beauchamp, 914 E. 20th Ave., Denver, Colo.; Keren J. White, Wautoma, Wis.; Albert A.

(Continued on page 126)

The New **COLLEGE HUMOR** *15c Everywhere*

THE "SWAP" COLUMN

Here's where you can exchange something you have but don't want for something someone else has that you do want. This is a FREE service.

Limit your request to 25 words. No goods for sale listed, nor requests concerning firearms or any illegal articles.

IMPORTANT: No "swaps" of back magazine issues are listed. This rule has been adopted to safeguard the health of our readers. Back numbers of magazines are known disease-carriers.

Type or hand-print clearly, in submitting announcements. THRILLING WONDER STORIES will not be responsible for losses sustained. Make plain just what you have and what you want to "swap" it for. Enclose a clipping of this announcement with your request. Address Swap Column, THRILLING WONDER STORIES, 22 West 48th Street, New York, N. Y.

Trade printer's cut for cuts I do not have, or photographic material or printing material. Consider anything. Send proofs. All inquiries answered. Frank's Printing, Tipton, Box 253, Missouri.

New electric 2-tube all wave radio set, model airplane equipment, for good telescope, microscope or anything but stamps. John Szlucha, R. D. 1, Owego, New York.

Have crystal radio set, will trade for binoculars. Leslie Scott, Pleasant Plains, Arkansas.

Have brand new Spanish steel string, steel plated guitar and fencing swords. Will swap for anything of value. Send list. Fred Ledwell, Jr., 28 Church St., Erlanger, N. C.

Want navy covers, old U. S. postal cards and old U. S. envelopes. Have good foreign stamps, postmarks, meter and permit Nos. R. Garrant, 8227 So. Ashland Avenue, Chicago, Illinois.

Have magician's card vanisher, works in sleeve. Cards disappear and reappear at will. What'll you swap for it? Branson MeHarg, Chillicothe, Texas.

Will swap stamps. Have many to exchange. Send 100, 200 receive same number. Clayton Howland, 1145 18th Street, Des Moines, Iowa.

Will exchange foreign stamps for theatre stubs from all towns and cities. Exchange on equal basis. Do not send duplicates. M. Weiner, 1668 Prospect Pl., Brooklyn, N. Y.

Have $75.00 worth radio parts. Will trade for books, stamps and coins. Make your offers. A. Von Bell, 222 S. Main, Winston-Salem, N. C.

Have United States stamps, mint and used. Six ft. Lemonwood English bow, 8mm. movie camera Univex. Want outboard motor or anything you may have to offer. Jas. E. Wilhelm, 423 Randolph Avenue, Elkins, W. Va.

16 mm. comedy, cartoon, scientific, Educational 100-800 foot films wanted. Give name, length and condition. Exchange list sent. Louis Leibovitz, 3835 Cambridge, Philadelphia, Penna.

Swap LaSalle accounting course for most anything. Geo. Mooney, 326 N. Belmont Avenue, Los Angeles, California.

Have 250x microscope in fine condition to trade for motorcycle motor, war relics, baseball goods or anything. Robert Kidol, Cream Ridge, New Jersey.

Will exchange foreign coins and stamps for United States and foreign stamps. H. G. Schaeffer, 1320 Fulton Avenue, New York City, N. Y.

Send list of trade articles. Want especially good moving or still camera and equipment, microscope. Have good chemical laboratory, stamp collection, etc. Will send list. Virgil Pollock, 1742 Erie Street, Toledo, Ohio.

HARMONIOUS DEVELOPMENT of WOMEN'S BODIES

135 Beautiful Photographs

of Miss Bloch's pupils taken undraped, illustrating clearly the various exercises explained in the text.

Between the covers of this book is an effective system of body culture for improving your figure, and enjoying physical fitness—"an effective guide to charm, poise, beauty."

"The undraped figure was chosen for the illustrations . . . to bring out sharply the lines desired; also to bring out clearly a picture of every detail of the action. . . . To the pure in mind everything is pure and this book is meant only for the mature and serious minded."
—From Preface to 6th Edition

HYGEIA (published by the American Medical Association) says: "Excellent . . . 135 photographs . . . show clearly the action."

Price $3 (*Postage 15c extra*)
5-Day Money-Back Guarantee
To get your copy promptly, mail now to
HEALTHCRAFT GUILD
Dept. 867-F, 247 West 19th Street, New York

for MORE PAY learn DRAFTING From An ENGINEER

GET READY FOR PROSPERITY. Be ready for BIG PAY. I will train you at your home by mail on Practical Drafting until IN POSITION, or prepare you for BETTER PAY on the Job you have. All tools and drawing table sent at once if you enroll now. WRITE FOR FREE BOOK.

ENGINEER DOBE. Div. A-417 Libertyville, Ill.

ASTHMA TREATMENT mailed on Free Trial. If satisfied, send $1; if not, it's Free. Write me for your treatment today.
W. K. STERLINE, 830 Ohio Ave., Sidney, Ohio

FOREST JOBS

available at $125-$175 per month, steady. Cabin. Hunt, trap, patrol. Qualify at once.
Get details immediately.
Rayson Service Bureau, B-56 Denver, Colo.

STOP FOOT PAINS

by wearing these invisible, scientifically constructed OMNIPED Foot Cushions. Relieves pain instantly from weak, tired, complaining feet thru the gentle, painless, massaging action of these foot cushions. Quick and Certain Relief. Unlike other foot appliances. Try Omnipeds at our risk for a week — money back if not satisfied. Send size of shoe with currency, check, or money order. $1.00 a pair

OMNIPED PRODUCTS, Dept. TF-6, 1185 Broadway, N. Y. C.

FALSE TEETH

60 DAYS TRIAL

I have thousands of satisfied customers all over the country who could not afford to pay big prices. I have been making dental plates for many years by mail. I guarantee you satisfaction or they do not cost you one cent, and I take your word. Teeth made especially for you personally can be tried for sixty days. In one Pennsylvania town alone, 91 people are wearing teeth made by me. They are satisfied and have saved money.

SEND NO MONEY

My plates are very beautiful to look at and are constructed to give life-long service and satisfaction. You can look younger at once. They are made with pearly white genuine porcelain teeth. Well fitting and guaranteed unbreakable. Remember you do not send **FREE** one cent—just your name and address, and we send free impression material and full detailed directions. Be sure to write today for my low prices and complete information. Don't put this off. Do it today.

DR. S. B. HEININGER, D. D. S.
440 W. Huron St., Dept. 650, Chicago, Illinois

PILES DON'T BE CUT
Until You Try This Wonderful Treatment

for pile suffering. If you have piles in any form write for a FREE sample of Page's Pile Tablets and you will bless the day that you read this. Write today. E. R. Page Co., 421-B11 Page Bldg., Marshall, Mich.

Mechanics AND HANDICRAFT

The Magazine of
Science—Invention—Experiments

NOW ON SALE AT

A NEW LOW PRICE

10c

At All Stands

THE SCIENCE FICTION LEAGUE

(Continued from page 124)

Siclaras, 55 Litlegow St., Dorchester, Mass.; Constance Lockard, 4140 Charlotte, Kansas City, Mo.; Bob Barnett, 1318 So. Maple St., Carthage, Mo.; Leora Belery, 132 Jewel St., Munising, Mich.; Jack Tarbell, 73 Whitney Ave., New Haven, Conn.; Harry Morton, 1220 Smead St., Logansport, Ind.; Robert L. Jones, 4434 Winona Ct., Denver, Colo.; La Rae Johnson, 428 N. Prospect St., Rockford, Ill.; Helen Kierzkowski, Woodcliff Inn., R. D. 1, Clarks Summit, Pa.; Jack Johnson, 3009 N. Swanson Btr., Phila, Pa.; Dr. Samuel Gottfried, 226 Jay St., Sacramento, Calif.; Thomas York, 257 W. 113 St., N. Y., N. Y.; George Markus, Jr., 537 Ohio St., Dayton, Ohio; W. C. Rogus, 701 Mulberry St., Evansville, Ind.; Frederick Daugs, Monona, Iowa; Norman Pastor, 1728 Grand Ave., Dayton, Ohio; James Davidson, 520 Branard, Houston, Texas; Alfred Anderson, Rt. 1, Box 49C, Florin, Calif.; Lester Bennett, 601 Bird Ave., Buffalo, N. Y.; L. Maran, 210 W. 101 St., N. Y. C.; John M. Clewis, Jr., 1333 W. Jackson Blvd., Chicago, Ill.; Arthur Mack, 3566 E. 156, Shaker Heights, Ohio; John Gwinn, 254 9th St., Troy, N. Y.; Harold Schaeffer, 1320 Fulton Ave., N. Y., N. Y.; C. E. Forst, 227 S. Peck Dr., Beverly Hills, Calif.; Alonzo Blake, 58 Morningside Ave., N. Y. C.; John B. Michel, 2223 Cortelyou Rd., Brooklyn, N. Y.; Herluf Jensen, c/o H. O. Jensen, D.S.R., El Campo, Texas; Jimmy Shuey, Unionville, Mo.; Leonard Vogel, 1750 Ocean Parkway, Brooklyn, N. Y.; W. Mayne, 2031 Arch, Phila., Pa.; A. R. Long, 2036 N. Fifth St., Harrisburg, Pa.; Casimir Pierog, 7603 Osage Ave., Cleveland, Ohio; William J. Noble, 301 Cedarhurst St., Pittsburgh, Pa.; Myron Weinberg, 3554 Rochambeau Ave., Bronx, N. Y.; Robert Simon, Box 335, Gueydan, La.; Carl Robinson, R.R. 1, Box 22, Morganfield, Ky.; Alex Chanin, 1451 Crotona Pl., Bronx, N. Y.; Harry Smejkal, 3310 Campbell Dr., N. Y., N. Y.; James Metts, 411 Carlton Ave., Brooklyn, N. Y.; Wm. Howard, 1 W. Lowell St., Lawrence, Mass.; Jack C. McQuese, 2323 Rowan St., Louisville, Ky.; T. B. Yerke, 157 N. Alexandria Ave., Los Angeles, Calif.; Chester Hoey, 441 1st St., Brooklyn, N. Y.; Robert Miles, 456 Cleveland St., Woodland, Calif.; H. Biermann, 3130 Lincoln Ave., Chicago, Ill.; Everett DeGuzzie, 3 Bundy Ave., Bath, N. Y.

Aubrey M. Brundick, 4005 Carlisle Ave., Baltimore, Md.; Edward V. Kownack, 820 E. 168 St., Bronx, N. Y.; Howard Cooper, 7 Jacoby St., Maplewood, N. J.; Jack Gray, 3430 Lanfranco, Los Angeles, Calif.; Kenneth Meeks, 841 N. Latrobe Ave., Chicago, Ill.; E. A. Witmer, P.O. Box 194, Republic, Mo.; Will Wonner, 739 E. Boundary Ave., York, Pa.; Eugene Favilla, 112 Franklin Ave., Brooklyn, N. Y.; Marvin Cohn, 138 S. Maryland Ave., Atlantic City, N. J.; Frederick H. Schmidt, Jr., Palacios, Texas; Havey S. Lockwood, Co. K. 19th Inf., Selo Bks., T. H.; Virgil D. Smith, 3430 Lanfranco St., L. A., Calif.; A. Denson, 4 E. Main St., Rockville, Conn.; Anthony Dominick, 17-51 St. Johns Pl., N. Y. C.; Isidore Slepack, 43 Christopher Ave., Brooklyn, N. Y., Alfred C. Denson, 20 Davis Ave., Rockville, Conn.; Jack Hammill, 1362 Eastwood Ave., Columbus, Ohio; Charles Cox, Box 752, McCamey, Texas; T. Bruce Yerke, 137 N. Alexandria, Los Angeles, Calif.; Walter Saedlow, 2022 N. Spaulding, Chicago, Ill.; Thomas W. Ramsey, 110 S. Washington St., Lock Haven, Pa.; Virgil S. Pollock, 1742 Erie St., Toledo, Ohio; Bernard Kramlich, 88 Jefferson Ave., Oshkosh, Wisc.; Wm. Stubbs, 652 W. 189 St., N. Y., N. Y.; Jack Gillespie, 84 Wadsworth Terrace, N. Y., N. Y.; Hal Biermann, 1453 George St., Chicago, Ill.; Alvin Reed, 35 Ash St., Ludlow, Ky.; B. Wimen, Jr., 624 Worth St., Pittsburgh, Pa.; Gilbert Dancy, 123 Lancaster St., Albany, N. Y.; Charles L. Cottrell, 27 Dunnond Ave., Red Bank, N. J.; Isreal Marks, 837 Albany St., Schenectady, N. Y.; Walter Simpson, 4128 N.

(Continued on page 128)

Gayer **COLLEGE HUMOR** *15c Everywhere*

Scientifilm Review

THE MAN WHO COULD WORK MIRACLES. A London Films production. Produced by Alexander Korda, directed by Lothar Mendes, featuring Roland Young. From a story by H. G. Wells.

A TYPICAL Wellsian fantasy, intelligently, handsomely and delightfully done—with a stupendous situation, a very average human figure, and a moral.

A shabby little shop assistant finds that he can perform miracles. His first modest ambition—conjuring in music-halls—is complicated by the meddlings of a selfish girl, a banker, a preacher and a Tory colonel. He suddenly realizes his power and, as a self-made Prince of the world, brings before him all bosses of finance, government and manners for a conference.

Here the film achieves stature. Upon the captains and kings this new master pours his criticism and invective—an indictment of a bad old world by an average man who, long hurt and helpless, has become suddenly powerful and articulate. It is a long speech, trumpeting and scathing, and not once does it drag. His final cry, "Rule the world better or I'll wipe you all out," is the high point of the piece.

Then the Wellsian moral: dazzled with his own power, the miracle-worker commands the Earth to cease revolving—and all is spectacular chaos. Flying through space, he has only time and strength to wish everything back on a pre-miracle basis. But this lesson fails; you of the audience are more apt to dream of the miracles you'd do in the shop-assistant's stead.

Score one for Producer Alexander Korda, who is probably the greatest and most adroit figure in films today. Roland Young, as the miracle man, tints the role with his usual stylized restraint and charm. Ralph Richardson is splendid in his characterization of the stuffy colonel, and Ernest Thesiger irks artistically as the minister. The sets offer an English atmosphere that all Hollywood could not achieve.

And the miracles—from the first uneasy juggling of a lamp in a public-house to the final destruction of Earth—are the meat of the picture for all lovers of the fantastic and the startling.

—M. W. W.

Next Issue

•

RIFT IN INFINITY
A Complete Novelette of Absolute Space

By PAUL ERNST

MONEY AND A BIKE!

BOYS, 12 to 15, a streamlined aluminum bicycle for you! Fully equipped; flashy, sturdy, a pip! Three hundred other prizes, including watches, clothing, movie, typewriter. Earn what you want. Make money, besides. It's easy! Just obtain customers in your neighborhood and deliver our magazines to them. Need not interfere with school or play. Many boys earn a prize the first day. Perhaps you can, too. Get the jump on your chums. To start on the road to money and prizes right away, write to—

Jim Thayer, Dept. 725
The Crowell Publishing Co.
Springfield, Ohio

Rheumatism Relieve Pain In 9 Minutes

To relieve the torturing pain of Rheumatism, Neuritis, Neuralgia or Lumbago in 9 minutes, get the Doctor's Prescription **NURITO.** Absolutely safe. No opiates, no narcotics. Does the work quickly—and must relieve your worst pain in nine minutes or your money back at Druggist's. Don't suffer. Use guaranteed **NURITO** today.

ECZEMA

is not a skin disease, says Dr. Hoermann, well-known Milwaukee Eczema specialist. If you have **Eczema,** sometimes called **salt rheum, weeping eczema, milk crust, scald head, moist tetter,** write for book of little-known facts FREE. Also learn about Dr. Hoermann's simple home treatment which has produced **amazing** results in his private practice. **Dr. Rud. Hoermann, Inc., Suite 382, 2200 N. Third St., Milwaukee, Wis.**

RAISE GIANT FROGS

FREE BOOK

Easy to Start! Market Waiting! Use small pond to begin. Expand with the increase. Easy to ship. Other markets waiting also. **Men & Women** starting in every state. See what others are already doing. Send for free frog book explaining unusual offer to beginners. **American Frog Canning Co., (Dept. 106-H) New Orleans, La.**

WE BUY!

WORK FOR THE GOVERNMENT

START $1260 to $2100 YEAR
MEN—WOMEN
Mail Coupon Today SURE.

COUPON

FRANKLIN INSTITUTE
Dept. C269, Rochester, N. Y.
Sirs: Rush without charge, (1) 32-page book with list of U. S. Government Jobs. (2) Tell me how to get one of these jobs.
Name.....
Address.....

Funnier **COLLEGE HUMOR** *15c Everywhere*

How to Get a Well-Paid
Hotel Position
GOOD PAY
FASCINATING WORK
LUXURIOUS SURROUNDINGS
Hostess
Manager
Asst. Mgr.
Cashier
Housekeeper
Previous experience proved unnecessary with unique, low-cost, home-training plan. Salaries up to $1,500 to $5,000 yearly. National Placement Service FREE of extra cost—opportunities everywhere in hotels, clubs, restaurants, etc. FREE BOOK gives facts, secrets of getting into this fascinating field NOW! Send this ad with name and address for your copy—no obligation.
(Check position in which you are interested)
LEWIS HOTEL TRAINING SCHOOLS
Room PG-959 Washington, D. C.

FREE AUTOMOBILE
FOR B.P.A. REPRESENTATIVES
Big cash commissions every month for agents selling new kind of low cost family group life insurance. Also Free Deluxe Ford, Chevrolet or Plymouth to all agents who make good. No previous experience necessary—simple to sell. If you want to own a car and make money write today to Benefit Protective Association of America, 105 Hall Bldg., Kansas City, Mo.

DO YOU LACK VITALITY · ENERGY
Do you feel tired, weak, run down, irritable? Do you suffer from indigestion, constipation? Many of these ailments are often due to a weak run-down condition. Send at once for a free 15-day treatment of Dr. Rainey's V-Tal Tablets (a $1.00 supply), also Dr. Rainey's splendid laxatives (25c size).
15 Days Supply FREE
Just send 10c to cover postage, packing and handling charges.
The Rainey Drug Co., Inc.
108 West Lake Street
Dept. A-218, Chicago, Ill.

Prostate Sufferers
Prostate gland acute or chronic, rheumatism, kidney and bladder sufferers send for free trial package, amazing results. Endorsed by doctors.
PROSTEX COMPANY, Dept. 31, Miami, Oklahoma.

POPULAR WESTERN
NOW 10c AT ALL STANDS

THE SCIENCE FICTION LEAGUE
(Continued from page 126)

5th St., Phila., Pa.; Morris Stavisky, 598 Howard Ave., Brooklyn, N. Y.; Bert Christy, 802 Worthington Pl., Omaha, Nebr.; Roger C. Patrick, 732 Birch Drive, Mason City, Iowa; Howard Myers, 16½ Burke St., Winston-Salem, N. C.; Alex S. Mroz, 262 Lowell St., Manchester, N. H.

NEW MEMBERS

CANADA

Keith Young, Lunenburg, Nova Scotia, Canada; Walter R. T. Romain, Box 49, Wildwood, Alberta, Canada; Edward Townsend, New Waterford, C. B., N. S.; Frank Lloyd, Cordova, Mines, Ont., Cana.; J. Ferguson Stewart, 1090 Laurier Ave., W., Outremont, Quebec, Canada; Peter Whalley, 2327 W. 35th Ave., Vancouver, B. C., Canada; Alfred L. Foster, 183½ Sherbourne St., Toronto, Cana.; L. Middleton, Suite La Rosslyn Ct., 109 St., Edmonton, Alta, Cana.

ENGLAND

Eric Miller, 14 Princes Court, Wembley, Middlesex, Eng.; Harold J. Blakeley, 97 Canning Rd., Wealdstone, Middlesex, Eng.; Jack Lewin, 46 Rose Hill Terrace, Brighton, 7 Sussex, Eng.; Fred L. Jackson, 52 Daffodil Rd., Farnsworth, Lanchashire, Eng.; John B. Jepson, Sunnyhurst, Leyland Rd., Nuneaton, Warwicks, Eng.; P. W. Burnell, 9 Bulstrode Ave., Hounslow, Middlesex, Eng.

APPLICATION FOR MEMBERSHIP
SCIENCE FICTION LEAGUE

Science Fiction League,
22 W. 48th St., New York, N. Y.

I wish to apply for membership in the SCIENCE FICTION LEAGUE. I pledge myself to abide by all rules and regulations.

Name .....
(Print Legibly)

Address .....

City .....

State ..... Age....

Occupation ..... Hobby.....

I am enclosing a stamped, self-addressed envelope and the name-strip from the cover of this magazine (tear off name-strip so that the name THRILLING WONDER STORIES and the date can be seen). You will send me my membership certificate and a list of rules promptly.

6—37

Better COLLEGE HUMOR 15c Everywhere

FORECAST for the NEXT ISSUE

PENTON and Blake are back again in a new story of interplanetary exploration!

In THE DOUBLE MINDS, a new novelette by JOHN W. CAMPBELL, Jr., they discover an alien form of life even stranger than the *thushol* of Mars—the *shleath* of Ganymede! It's an absorbing story of scientific secrets.

* * *

FIVE men and two girls speed through the stratosphere high over the Rockies. Suddenly, without an instant's warning the altimeter registers—*nothing!* Seven souls are lost in the unknown of absolute space!

That's the dramatic start of RIFT IN INFINITY, a new novelette by PAUL ERNST. It's a thrilling story of a cosmic slip that could happen but once in a lifetime!

* * *

OTIS ADELBERT KLINE'S novelette for next month, THE IRON WORLD, pictures a future continent inhabited by thinking automatons. But in a secret laboratory in a remote corner of the land one master scientist, with a mechanical body and a living brain, plots a robot rebellion to overthrow forever the last of the human race—and make the earth a planet where only the metal men reign!

* * *

MATTHEW YORK'S chemical-stained fingers caressed a thin test-tube filled with a sparkling, radiant fluid. Man's key to immortality—the elixir of youth—lay imprisoned in that liquid. What should he do with it? Give it to the world—or destroy it? CONQUEST OF LIFE, a powerful novelette of laboratory magic, by EANDO BINDER, gives you the amazing answer.

* * *

All these, and stories by Edmond Hamilton and many others, are scheduled for the next issue. In addition, an article on space travel by P. E. Cleator, and another installment of the brand-new fascinating feature, IF.

GUARANTEED TIRES!
GOODYEAR-GOODRICH FIRESTONE-U.S. and Other Standard Makes

World's Lowest TIRE PRICES
Tire users by the thousands all over the U.S.A. vouch for the Long Hard Service of our Standard Brand tires reconditioned with high grade materials and latest methods by our tire experts. Our 21 years experience makes it possible to offer tires at lowest prices, with legal agreement to replace at ½ price any tire that fails to give 12 Mos. Service.

FREE! LANTERN With Every 2 Tires ordered

Complete with batteries and newest type reflector bulb. Ready for instant use. Strong, steady light. Useful everywhere. Order now.

EVERY TIRE GUARANTEED!

BALLOON TIRES

Size Rim	Tires	Tubes
29x4.40-21	$2.15	$0.85
29x4.50-20	2.35	.85
30x4.50-21	2.40	.85
28x4.75-19	2.45	.95
29x4.75-20	2.50	.95
29x5.00-19	2.85	1.05
30x5.00-20	2.85	1.05
5.25-17	2.90	1.15
28x5.25-18	2.90	1.15
29x5.25-19	2.95	1.15
30x5.25-20	2.95	1.15
31x5.25-21	3.25	1.15
5.50-17	3.35	1.15
28x5.50-19	3.35	1.15
29x5.50-19	3.35	1.15
6.00-17	3.40	1.15
30x6.00-18	3.40	1.15
31x6.00-19	3.40	1.15
32x6.00-20	3.45	1.25
33x6.00-21	3.65	1.25
32x6.50-20	3.75	1.35
6.00-16	3.75	1.45

REGULATION CORD TIRES

Size Tires	Tubes	
30x3½	$2.25	$0.75
31x4	2.95	.85
32x4	2.95	.85
33x4	2.95	.85
34x4	3.25	.85
32x4½	3.35	1.15

Size Tires	Tubes
33x4½	$3.45 $1.15
34x4½	3.45 1.15
30x5	3.65 1.35
33x5	3.75 1.45
35x5	3.95 1.55

HEAVY DUTY TRUCK TIRES (High Pressure)

Size Tires	Tubes	
30x5	$4.25	$1.95
33x5	3.95	1.45
34x5	4.25	2.00
32x6	7.95	2.75
36x6	9.95	3.95

Size Tires	Tubes
34x7	$10.95 $3.95
38x7	10.95 3.95
36x8	11.45 3.95
40x8	13.25 4.15

TRUCK BALLOON TIRES

Size Tires	Tubes	
6.00-20	$3.75	$1.65
6.50-20	4.45	1.95
7.00-20	5.95	2.95

Size Tires	Tubes
7.50-20	$6.95 2.75
8.25-20	8.95 $4.95
9.00-20	10.95 5.65
9.75-20	13.95 6.45

ALL OTHER SIZES — DEALERS WANTED

SEND ONLY $1.00 DEPOSIT on each tire ordered. ($3.00 on each Truck Tire.) We ship balance C. O. D. Deduct 5 per cent if cash is sent in full with order. To fill order promptly we may substitute brands if necessary. ALL TUBES BRAND NEW—GUARANTEED—

PERRY-FIELD TIRE & RUBBER CO.
2328-30 S. Michigan Av., Dept. T.F.2, Chicago, Ill.

The PHANTOM never misses!

Follow the World's Greatest Sleuth on a Baffling Murder Trail

in

THE DANCING DOLL MURDERS

A Full Book-Length Novel

●

in the June Issue of

THE PHANTOM DETECTIVE

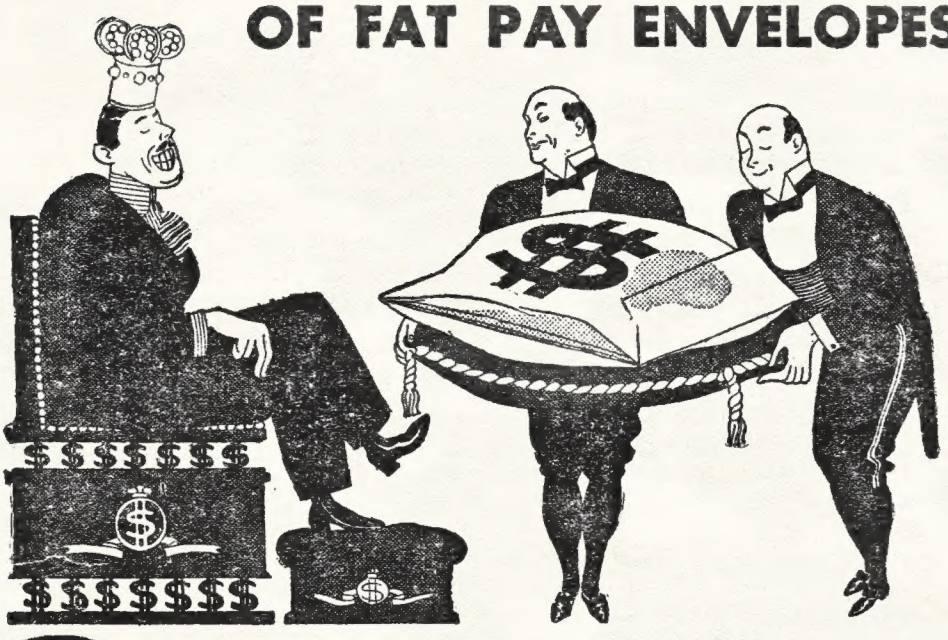
A THRILLING PUBLICATION

●

EVERY MONTH **10c** AT ALL STANDS

Smarter **COLLEGE HUMOR** *15c Everywhere*

DO YOU JUST DREAM OF FAT PAY ENVELOPES?



DREAMING is a grand pastime but it will never add a single dollar to your pay envelope. The truth is, the only safe way to get more money is to deserve more money! You will never be surprised in the pay envelope unless you surprise somebody on the job. **TRAINING** (you can acquire it through spare-time study of an I. C. S. Course) is the answer! This coupon is the first step.

INTERNATIONAL CORRESPONDENCE SCHOOLS

BOX 3969-J, SCRANTON, PENNA.

★ Without cost or obligation, please send me a copy of your booklet, "Who Wins and Why," and full particulars about the subject *before* which I have marked X: ★

TECHNICAL AND INDUSTRIAL COURSES

☐ Architect	☐ Sheet Metal Worker	☐ Plumbing ☐ Steam Fitting	☐ Bridge Engineer
☐ Architectural Draftsman	☐ Boilermaker	☐ Heating ☐ Ventilation	☐ Bridge and Building Foreman
☐ Building Estimating	☐ Telegraph Engineer	☐ Air Conditioning	☐ Chemistry
☐ Contractor and Builder	☐ Telephone Work ☐ Radio	☐ Steam Engineer	☐ Pharmacy
☐ Structural Draftsman	☐ Mechanical Engineering	☐ Steam Electric Engineer	☐ Coal Mining
☐ Structural Engineer	☐ Mechanical Draftsman	☐ Marine Engineer	☐ Mine Foreman ☐ Fire Bosses
☐ Management of Inventions	☐ Machinist ☐ Toolmaker	☐ R. R. Locomotives	☐ Navigation
☐ Electrical Engineer	☐ Patternmaker	☐ R. R. Section Foreman	☐ Cotton Manufacturing
☐ Electric Lighting	☐ Diesel Engines	☐ Air Brakes ☐ R. R. Signalmen	☐ Woolen Manufacturing
☐ Welding, Electric and Gas	☐ Aviation Engines	☐ Highway Engineering	☐ Agriculture
☐ Reading Shop Blueprints	☐ Automobile Mechanic	☐ Civil Engineering	☐ Fruit Growing
☐ Heat Treatment of Metals	☐ Refrigeration	☐ Surveying and Mapping	☐ Poultry Farming

BUSINESS TRAINING COURSES

☐ Business Management	☐ Bookkeeping	☐ Service Station Salesmanship	☐ Grade School Subjects
☐ Industrial Management	☐ Secretarial Work	☐ First Year College Subjects	☐ High School Subjects
☐ Traffic Management	☐ Spanish	☐ Business Correspondence	☐ College Preparatory
☐ Accountancy	☐ French	☐ Stenography and Typing	☐ Illustrating
☐ Cost Accountant	☐ Salesmanship	☐ Civil Service ☐ Mail Carrier	☐ Cartooning
☐ C. P. Accountant	☐ Advertising	☐ Railway Mail Clerk	☐ Lettering Show Cards ☐ Signs

DOMESTIC SCIENCE COURSES

☐ Home Dressmaking	☐ Advanced Dressmaking	☐ Millinery	☐ Foods and Cookery
☐ Professional Dressmaking and Designing		☐ Tea Room and Cafeteria Management, Catering	

Name.....*Age*.....*Address*.....

City.....*State*.....*Present Position*.....

If you reside in Canada, send this coupon to the International Correspondence Schools Canadian, Limited, Montreal, Canada

BROADCAST *thru your radio* TALK - SING - PLAY

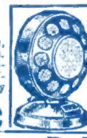
BROADCAST your voice on programs coming through your own radio set—make announcements from any part of the house—inject wise cracks, **josh and mystify friends.** Imitate radio stars, practice crooning, singing, radio acting, etc. Do a "Ben Bernie" or a "Rudy Valee."

World Mike

Made especially for home use, attached in a jiffy without tools. **Not a toy.** Put on your own programs at home, parties, club affairs, etc. Barrels of fun! Easy to operate.

Price Postpaid 25c

DELUXE MIKE



Large, substantial, all-metal mike. Practise radio singing, broadcasting, programs, etc., thru your own radio. Reproduces voice in loud, clear tone without distortion. Regular table model—can be held in hand. Guaranteed. Connected without tools., Price **75c**

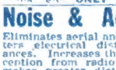
CRYSTAL RADIO 25c

This is a radio in itself as it is possible to get reception with it alone within 25 miles of a station for up to 100 miles under good conditions. All you need is an aerial & ear phone. Completely assembled & wired with supersensitive crystal, stand, base, crystal cup, arm with cat's whisker, etc. Reception guaranteed. **25c**

ALL WAVE WORLD WIDE RADIOS

Remarkable results—simple operation—low prices! **15 to 600 meters. Gets police calls, foreign stations anywhere, code, short wave, foreign and domestic broadcasts, etc.** with remarkable volume and efficiency. Each set complete without tube, phone, battery or aerial. **ONE TUBE BATTERY SET.** Good headphone volume. **Complete Kit $1.55** Wired ready to operate **$2.30. SUPER ONE TUBE BATTERY SET.** Gives better volume & reception. **Complete Kit $2.00 Wired, ready to operate $2.75. ELECTRIC TWO TUBE.** Operates on house current. Uses no batteries. Powerful, sensitive, selective. **Kit, $3.00. Wired, ready to operate. $3.75.**

Radio & Television Book



How to build inexpensive crystal sets, electric radio, short wave radio, hints on building television set. With a television set you can **SEE** as well as **HEAR** reception. Tells how a simple home set may be built. Book of plans, etc. **ONLY 10 CENTS.**

Noise & Aerial Eliminator

Eliminates aerial and filters electrical disturbances. Increases the reception from radio and makes greater distance and volume possible. Guaranteed. **Price Postpaid 50 Cents.**

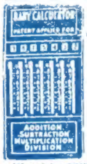
YACHT CAPS 25c

Smart, snappy. Just what every real boy is wearing. Cool and comfortable. **White Twill Yacht Cap,** with black oilcloth peak, sweat band, gold braid and brass buttons with anchor. **Price 25c**
White Duck Yacht Cap, superior quality duck, white celluloid cap, gold cord, brass buttons and red, white and blue anchor on front. State size. **Price postpaid 35**

JAPANESE ROSE BUSHES

Bushes bloom all the year round. 6 weeks after planting they will be in full bloom. We positively guarantee it to be so. Bloom every ten weeks, summer or winter, and when three years old the bush will be a mass of roses bearing from 500 to 1,000 roses on each bush. The flowers are in 3 shades—white, pink, and crimson. At least three bushes from a packet of seed. Price 10c pkt., 3 pkts 25c postpaid.

New Vest Pocket Adding Machine



Adds, subtracts, multiplies, divides. Does work of a costly machine. Ten million capacity. Simple and accurate. **NOT A TOY.** Easy to operate. No keys to punch, no lever to pull. Total always visible. Guaranteed for 5 years. Lightning calculator and time saver. Constructed of steel ensuring strength, durability and reliability. Lasts a lifetime. Compact and light. Weight 7 oz. Will fit right in vest pocket and can be carried about without inconvenience. 3x6in. **Price . . $1.50**

Pocket Radio $1.00

Amazing midget radio fits in pocket. **Weighs 2 oz.** Smaller than a cigarette package. Separates and receives all stations with beautiful, clear tone. Range 50 miles — greater under good conditions. No static or noise. Nothing to wear out—lasts for years. **No crystals** to adjust. **New** sensitive rectifier and hi-efficiency design. **Not a toy, but a practical radio. Complete.** Operates in hotels, offices, autos in bed, on bicycles, at sea, or anywhere. Without phone. **Price $1.00.** Single Phone 89c, Double Phone Headset $1.79 Postpaid.

INDIAN MOCCASIN KIT — Moccasin Kit

Contains material all ready cut and instructions to assemble these moccasins—comfortable slippers that are swell for wearing around the house on cold nights, or even running around outside. Durable suede. Fun to make. **State size. Price $1**

Midget Bible

Size of a postage stamp. Over 200 pages. Every word legible. The complete New Testament. Said to bring good luck to owner. **Price 15c**

Learn DANCING

OVER 101 ILLUSTRATIONS

25 Cents

LATEST STEPS. Be popular. Good dancers are always admired—always popular guests. Partners welcome them eagerly. The newest, smartest steps without a teacher. Don't make excuses when the music starts. Get lots of fun from parties and dances. If you want to become a perfect dancer, learn to dance at home this new easy way. **BOOK TELLS:** How to develop poise and control, improve your dance steps, art of holding, how to walk to music, how to lead, latest fox trot steps. Natural and Reverse Turns, the Reverse Wave, The Quickstep swaying to music. Waltz. Backward changes, the Continental, The famous Kiss dance, the Manhattan, the College Rhumba, the Carlo, Charleston, etc. **Art of Dancing 25c.** Cloth bound library edition **40c** postpaid.

HOW TO TAP DANCE

PRICE 25c

Why envy the easy rhythm and fascinating grace of Step'n Fetchit, Fred Astaire etc. Tap dance in ONLY 6 HOURS by a new simplified course by Prof. Wilson. No special ability needed. **Be** smart! Everybody's tapping. The whole town is tapping. Beat out a tune with your feet.

310 Illustrations

Hostesses love it. Friends adore it. Besides, tap dancing is not only invigorating and entertaining but is also a healthful exercise for making the limbs supple and giving a "springy" feeling of fitness to the whole body. **Promotes slimness nature's way—no pills, drugs or dieting. Readers say:** "..wonderful benefit. Thank you for adding tap dancing to my accomplishments." **Price 25c postpaid.** Cloth bound library edition **40c**

MIDGET RACER

Complete blueprints for 3 different racers. The one illustrated can be built for a few dollars. All about racer parts, gears, transmissions, dirt track racers, track regulations, blueprints, plans, how to add a motor to your bike at little cost, increasing speed, etc., etc. Crammed & jammed full of information

25c

Over 75 illustrations, **plans & blueprints. COMPLETE BOOK, only 25c. Deluxe cloth bound library edition, 40c.**

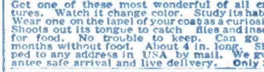
JU-JITSU DON'T BE BULLIED 30c

The Japanese art of self-defense. New methods of attack and defense are given, illustrated so that you cannot fail to understand them. **Deals fully** with trips, throws, wrist locks, body holds, defense against revolvers, strangling, armlocks, scissors, splits, headlock, holding a man down, double knee throw, stick attack, defense against knife, one hand throat grip, defense against two assailants, stomach throw, secret thumb knockout, nerve pinches, and numerous others. Learn to protect yourself under all circumstances with nature's weapons. **Fear no** man, guns or knives! "Science of Ju Jitsu" **Only 30c. Deluxe cloth bound library edition, 45c.**

LEARN TO HYPNOTIZE

See how easily you can master the secrets of Hypnotism and strange power. Sway others at will. Influence the thoughts of others, control their desires; and be the master of every situation. Make others love you, strengthen your will power, banish fear and worry, improve your memory, overcome bad habits, etc. **Price 25c**
Deluxe cloth bound library edition, 40c.

CHAMELEON 25c



WATCH IT CHANGE COLOR!

Get one of these most wonderful of all creatures. Watch it change color. Study its habits. Wear one on the lapel of your coat as a curiosity. Shoots out its tongue to catch flies and insects for food. No trouble to keep. Can go for months without food. About 4 in. long. Shipped to any address in USA by mail. We guarantee safe arrival and live delivery. **Only 25c**

WONDERFUL X-RAY 10c

GREAT CURIOSITY! With it you can apparently see the bones in the fingers, lead in a pencil, even the flesh seems transparent. Always ready for use. **Only 10 c ppd.**

BLANK CARTRIDGE PISTOL

REVOLVER STYLE 50c $1.00

Two models now out at **50c and $1.** Well made and effective. Patterned after latest type of Revolver. Appearance alone will scare a burglar. **Takes 22 Cal. Blank Cartridges obtainable everywhere. Great protection against burglars,** tramps, dogs. Have it laying around without the danger attached to other revolvers. Fine for 4th of July, New Years, stage work, starting pistol, etc. **Two sizes. Medium size 50c. Large size $1.00. Blank cartridges 50c per 100. Holster (cowboy type) 50c. Shipped Express Collect.**

Hi-Powered Air Pistols

Shoots B. B. Shots

A powerful high grade Air Pistol shaped like an automatic, pocket size. Fires B B shot obtainable anywhere. Very powerful yet perfectly safe for boys to handle. Two styles. Single shot Pistol or Repeater. The Repeater fires 100 shots in one loading. The Single Shot shoots rifle Darts and BB Shot. Well made and durable; all metal parts nickle plated; natural grain wood stocks. Front and rear sights. Better than an air rifle. Shipped express collect. **Single Shot Pistol $2.50; 100 Shot Pistol $5.00**

STAGE MONEY

With a bunch of these bills, it is easy for a person of limited means to appear prosperous by flashing a roll of these bills at the proper time and peeling off a genuine bill or two from the outside of the roll. The effect created will be found to be all that can be desired. **Prices: 40 bills 20c, 120 for 50c, or $3.50 per thousand postpaid**

FIELD GLASSES

WOW! What a **bargain! Real** genuine Field Glasses with six power magnification. Center piece quick, one finger focussing. **Permits full, unhampered, two eyed vision that gives remarkable scope and clarity.** Swell for nature study, hiking, sports, and a million other things. Complete with cord, packed in box. **ONLY 49c**

Pocket Telescope

***Eagle-Eye Vision* Six Power 25c**

Big. 3 draw, 6 power telescope for only **25c!** Swell for outdoors, nature study, sports, looking at the moon. Converted into **Solar telescope** by using smoked glass so you can see sun spots. etc. 5" long. **Price 25c.**

THRIFT VAULT 50c

A 3 dial safe lock and Vault Bank. Just dial the three numbers and open the vault just like any safe. Big and roomy—it measures about 4x3 in. Swell to keep your money, jewelry, etc. in. Constructed of heavy metal with red and black trimmings. Full instructions with each bank. **VAULT BANK only 50c postpaid.**
THRIFT VAULT Similar in appearance to the above only made of welded steel, and slightly larger. Packed in a box, with complete directions for opening. **Price, ppd. $1.25**

BOYS! BOYS! BOYS!

THROW YOUR VOICE!

Into a trunk, under the bed or anywhere. Lots of fun fooling teacher, policeman or friends.

THE WONDERFUL VENTRILO

a little instrument, fits in the mouth out of sight, used with above for Bird Calls, etc. Anyone can use it. Never fails. A complete book with full course on Ventriloquism together with the Ventrilo. Sent postpaid for only....... 10c

ELECTRITE PENCIL

Electrite Pencil writes in gold, silver, red, yellow, purple, green blue, etc., on leather, wood, paper, bakelite, cellophane, silk, rubber, etc., etc. Put your name, monogram or initials in gold or any other color on your car, wallet, golf clubs, fountain pen, stationery, etc. Print and decorate anything. Live-wire boys and girls can earn extra cash easily by doing this for other people. Every time you print a name or monogram on an article you can easily get 25c for it, yet it costs almost nothing except few seconds time! Easy to use. Just plug in electric light socket and the pencil is ready to write. **ELECTRITE PENCIL,** complete with supplies for writing 6 colors. **Only $1.00**

CCC RING

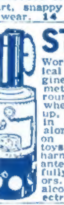
Everyone wants to wear this big ring with the red, blue and gold emblem surrounded by the American Eagle! Handsomely polished. State size. **Silver appearance Price only 25c**
Sterling Silver Ring, only $1.00.

U.S. NAVY RING Similar to the CCC ring, only with Navy Emblem, USN in bold relief with anchor. **Silver appearance, 25c. Sterling Silver, $1.00. 14 kt Gold with Sterling Emblem, $1.75.**

U.S. ARMY RING Similar to CCC ring, only with Army emblem. A large, oversize ring. **Silver appearance, 25c. Sterling Silver, $1.00. 14 kt Gold with Sterling Emblem, an effective contrast, $1.75**

AVIATION RING Similar to CCC ring, with Aviation Emblem. A smart, snappy ring that you will be proud to wear. **14 kt. Gold. Price $1.75**

STEAM ENGINE



World's biggest value in mechanical toys. A great big steam engine. 7 in. high by 2½ in. diameter. Watch the flywheel spin around and hear the engine puffing when you get the steam up. Light up, fill the boiler with water, and in a few minutes it is blazing along at top speed! Runs for hours on one filling and will run small toys off the fly wheel. Foolproof, harmless, fully tested and guaranteed to run. Engine is beautifully lithographed in several colors. New model which runs on alcohol or canned heat. **35c. Electric model, 45c, postpaid.**

Boy Electrician

Tells how to make batteries, dynamos, motors, radios, telegraph apparatus, telephones, lights, electric bells, alarms, coils, electric engines, etc. 64 pages, 100 illustrations. **Price Postpaid 10c**

FUN LICENSES 10c

Large size, nicely printed with seal, suitable for framing. Hand one of these to your friend and he will never forget you! Your choice: **Liar's License; Bootleggers Diploma; Marriage Certificate (it looks real); Liar's & grafter's Certificate; Gossiper's Certificate; Spanish Athletes (Bull Throwers) Certificate; Gold Diggers & Grafters Certificate; One Armed Drivers & Neckers Certificate; Kibitzer's Certificate; Death Certificate; Birth Certificate; Arrest Warrant; College Diploma, Dog License; Gold Mine Stock Certificate; Divorce Certificate; Air Pilot's License; Doctor's Certificate. Only 10c each, 3 for 25c.**

Open Any Lock

Did you ever lose or forget your keys? Probably many times. Don't worry any more about lost keys (or any keys, for that matter), as these master keys will open almost any ordinary lock. Five different keys for various types of locks. Will save their cost if you only use them once, but you'll probably find them so handy that you'll always carry them

5 MASTER KEYS Price 25c

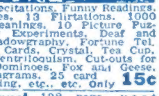
LUMINOUS PAINT

LUMINOUS PAINT, when applied to an object, emits rays of white light, rendering it visible in the dark. The darker the night—the brighter it shines. Simple to use—you can do it! Apply some to the dial of your watch so you can tell time at night. Paint pushbuttons, switches, anything, everything with it. **Small Bottle, 25c, Medium size 50c. Large size $1.00 postpaid.**

REPEATING SLING SHOT

Automatic repeating slingshot that will fire 150 shots with one loading! Designed for accuracy. Bulls eye every time. Extremely powerful and hard hitting—will go thru a 100 page magazine. More powerful than an air rifle. Sturdily constructed with non slip suede leather shot holder and thick lively cords. 150 BBs. **Slingo,** the automatic slingshot, **only 25c. Tube of 200 Copper coated BB's, 10c. Bell ringing Target, 30c.**

BIG ENTERTAINER



326 Jokes & Riddles, 25 Tricks, 10 Parlor Games, 73 Toasts, 13 Stories, 105 Money-making Secrets, 22 Monologs, 21 Puzzles, Problems, Comic recitations, Funny Readings, 10 Parlor Pastimes, 13 Flirtations, 1000 Names & their Meanings, 10 Picture Puzzles, 37 Amusing Experiments, Deaf and Dumb Alphabet, Shadowgraphy, Fortune Teller, Fortunes with Cards, Crystal, Tea Cup, etc., Hypnotism, Ventriloquism, Cut-outs for Checkers, Chess, Dominoes, Fox and Geese, 9 Men Morris, Anagrams, 25 card Tricks, Crystal Gazing, etc., etc. **Only 15c**

Civil Service Manual

128 page, vest pocket edition. Complete examinations, answers, applications, requirements. **Covers Railway Mail Service, Post Office Jobs, Engineering Dpt., Secret Service, Custom Service, etc. Price 50c**

ADDRESS ALL ORDERS FOR GOODS ON THIS PAGE TO

JOHNSON SMITH & CO.

DEPT. 353 DETROIT, MICHIGAN

Send 10c for OUR NEW CATALOG, or 25c for the DELUXE EDITION with permanent cloth binding. Bigger and better than ever. New items—different items—things that you never thought existed. Nearly 600 pages of magic, tricks, novelties, jokes, seeds, books, puzzles etc. STAMPS ACCEPTED

SILENT DEFENDER. (BRASS KNUCKLES.) Fit conveniently over knuckles. Pocket size. Wt. 2 oz. Aluminum. 25c each, 2 for 45c.

STOP THAT ITCHING AND SCRATCHING

According to the Government Health Bulletin No. E-28 at least 50% of the adult population of the United States are being attacked by the disease known as Athlete's Foot.

There are many other names given to this disease, but you can easily tell if you have it.

Usually the disease starts between the toes. Little watery blisters form and the skin cracks and peels. After a while the itching becomes intense and you feel as though you would like to scratch off all the skin.

FOOT-ITCH
(ATHLETE'S FOOT)

Send Coupon-Don't Pay till Relieved

Beware of It Spreading

Often the disease travels all over the bottom of the feet. The soles of your feet become red and swollen. The skin also cracks and peels, and the itching becomes worse and worse.

It has been said that this disease originated in the trenches, so some people call it Trench Foot. Whatever name you give it, however, the thing to do is to get rid of it as quickly as possible, because it is very contagious and it may go to your hands or even to the under arm or crotch of the legs.

Most people who have Athlete's Foot have tried all kinds of remedies to cure it without success. Ordinary germicides, antiseptics, salve or ointments seldom do any good.

Here's How to Treat It

The germ that causes the disease is known as Tinea Trichophyton. It buries itself deep in the tissues of the skin and is very hard to kill. A test made shows that it takes 20 minutes of boiling to kill the germ, so you can see why the ordinary remedies are unsuccessful.

H. F. was developed solely for the purpose of treating Athlete's Foot. It is a liquid that penetrates and dries quickly. You just paint the affected parts. It peels off the infected skin and works its way deep into the tissue of the skin where the germ breeds.

Itching Stops Immediately

As soon as you apply H. F. you will find that the itching is immediately relieved. You shou'd paint the infected parts with H. F. night and morning until your feet are well. Usually this takes from three to ten days, although in severe cases it may take longer or in mild cases less time.

H. F. will leave the skin soft and smooth. You will marvel at the quick way it brings you relief; especially if you are one of those who have tried for years to get rid of Athlete's Foot without success.

H. F. Sent on FREE TRIAL

Sign and mail the coupon and a bottle of H. F. will be mailed you immediately. Don't send any money and don't pay the postman any money, don't pay anything any time unless H. F. is helping you. If it does help you we know that you will be glad to send us $1.00 for the treatment at the end of ten days. That's how much faith we have in H. F. Read, sign and mail the coupon today.

Mail this Coupon

GORE PRODUCTS, INC.,
890 Perdido St., New Orleans, La.

Please send me immediately a complete treatment for foot trouble as described above. I agree to use it according to directions. If at the end of 10 days my feet are getting better I will send you $1.00. If I am not entirely satisfied I will return the unused portion of the bottle to you within 15 days from the time I receive it.

NAME .....

ADDRESS .....

CITY ..... STATE .....